DOCUMENT RESUME

ED 103 298 SO 008 127

AUTHOR Lipman, Matthew
TITLE Harry Stottlemier's Discovery [Revised Edition].
INSTITUTION Montclair State Coll., Upper Montclair, N.J. Inst. for the Advancement of Philosophy for Children.
PUB DATE Dec 74
NOTE 100p.; SO 008 124-126 are related Documents
AVAILABLE FROM Institute for the Advancement of Philosophy for Children, Montclair State College, Upper Montclair, N.J. 07043 ($5.00; quality documents)

EDRS PRICE MF-$0.76 HC-$4.43 PLUS POSTAGE
DESCRIPTORS *Abstract Reasoning; *Elementary Education; Elementary School Students; Humanities Instruction; Individual Development; *Inquiry Training; Instructional Materials; *Logical Thinking; *Philosophy; Productive Thinking; Reading Materials; Relevance (Education); Student Interests

ABSTRACT

"Harry Stottlemeier's Discovery" is the student book for the project in philosophical thinking described in SO 008 123-126. It offers a model of dialogue -- both of children with one another and of children with adults. The story is set among a classroom of children who begin to understand the basics of logical reasoning when Harry, who isn't paying attention in class, says that a comet is a planet because he remembers hearing that comets revolve around the sun just as planets do. The events that follow in the classroom and outside of school are a recreation of the ways that children might find themselves thinking and acting. The story is a teaching model; non-authoritarian, and anti-indoctrinating, it respects the value of inquiry and reasoning, encourages the development of alternative modes of thought and imagination, and suggests how children are able to learn from one another. Further, it sketches what it might be like to live and participate in a small community where children have their own interests, yet respect each other as people, and are capable at times of engaging in cooperative inquiry for no other reason than the satisfaction of doing so. (Author/JH)

Psychology
Philosophy for Children

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Matthew Lipman
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER

U.S. DEPARTMENT OF HEALTH EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

ED103298

BEST COPY AVAILABLE

published
by

the
institute
for
the
advancement
of
philosophy
for
children

montclair
state
college

upper
montclair
new
jersey
07043

HARRY STOTTLEMEIER'S DISCOVERY

00002

published
by

the
institute
for
the
advancement
of
philosophy
for
children

montclair
state
college

upper
montclair
new
jersey
07043

HARRY STOTTLEMEIER'S DISCOVERY

00003

Copyright © 1971, 1974

By Matthew Lipman

All Rights Reserved

Revised Edition, 1st Printing, December, 1974

Printed In The United States Of America

CHAPTER ONE

It probably wouldn't have happened if Harry hadn't fallen asleep in science class that day. Well, he didn't really fall asleep either. His mind just wandered off. The teacher, Mr. Bradley, had been talking about the solar system, and how all the planets revolve around the sun, and Harry just stopped listening, because all at once he had the picture in his mind of the great, flaming sun, and all the little planets spinning steadily around it.

Suddenly, Harry knew that Mr. Bradley was looking directly at him. Harry tried to clear his mind so that he could pay attention to the words of the question: "What is it that has a long tail, and revolves about the sun once every 77 years?"

Harry realized that he had no idea of the answer Mr. Bradley expected. A long tail? For a moment he played with the idea of saying "A dog star" (he had just read in the encyclopedia that Sirius was called the "dog star") but he was afraid Mr. Bradley wouldn't find such an answer amusing.

Mr. Bradley didn't have much of a sense of humor, but he was extremely patient. Harry knew he had a few moments, which might be just enough time to figure out something to say. "All planets revolve about the sun," he recalled Mr. Bradley saying. And this thing with the tail, whatever it was, also goes around the sun. Could it also be a planet? It seemed worth a try. "A planet?" he asked rather doubtfully.

He wasn't prepared for the laughter from the class. If he'd been paying attention, he would have heard Mr. Bradley say that the object he was referring to was Halley's comet, and that comets go around the sun just as planets do, but they are definitely *not* planets.

Fortunately the bell rang just then, signalling the end of school for the day. But as Harry walked home, he still felt badly about not having been able to answer when Mr. Bradley called on him.

Also, he was puzzled. How had he gone wrong? He went back over the way he had tried to figure out the answer. "All planets revolve about the sun," Mr. Bradley had

00005

said, very distinctly. And this thing with the tail also revolved about the sun, only, it *wasn't* a planet.

"So there are things that revolve around the sun that aren't planets," Harry said to himself. "All planets revolve about the sun, but not everything that revolves about the sun is a planet."

And then Harry had an idea. "A sentence can't be reversed. If you put the last part of a sentence first, it'll no longer be true. For example, take the sentence 'All oaks are trees.' If you turn it around, it becomes 'All trees are oaks'. But that's false. Now, it's true that 'all planets revolve about the sun'. But if you turn the sentence around and say that 'all things that revolve about the sun are planets', then it's no longer true—it's false!"

His idea so fascinated him that he decided to try it out with a few examples.

First he thought of the sentence, "All model airplanes are toys." I guess that's true, he reflected. Now let's turn it around: "All toys are model airplanes." When reversed, the sentence was false! Harry was delighted!

He tried another sentence: "All cucumbers are vegetables." (Harry was particularly fond of cucumbers.) But the reverse didn't follow at all. All vegetables are cucumbers? Of course not!

Harry was thrilled with his discovery. If he'd only known it this afternoon, he might have avoided that awful embarrassment!

Then he saw Lisa.

Lisa was also in his class at school, but somehow he didn't think she had been one of the kids who had laughed at him. And it seemed to him that if he told her what h·'d found out, she'd be able to understand.

"Lisa, I've just had a funny idea!" Harry announced, rather loudly.

Lisa smiled at him and looked at him expectantly.

"When you turn sentences around, they're no longer true!" Harry said.

Lisa wrinkled her nose. "What's so wonderful about that?" she asked.

"Okay," said Harry, "give me a sentence, any sentence, and I'll show you."

00006

"But what kind of sentence?" Lisa looked doubtful. "I can't just think up any old sentence offhand."

"Well," said Harry, "a sentence with two kinds of things in it, like dogs and cats, or ice cream cones and food, or astronauts and people."

Lisa thought. Then just as she was about to say something, and Harry was waiting impatiently for her to come out with it, she shook her head and thought some more.

"Come on, two things, any two things," begged Harry.

Finally Lisa made up her mind. "No eagles are lions," she announced.

Harry pounced on the sentence the way his cat, Mario, would pounce on a ball of string that had been rolled towards him. In an instant, Harry had the sentence reversed: "No lions are eagles." He was stunned. The first sentence, which said that "no eagles are lions," had been true. But so was the sentence when reversed, for it was also true that "no lions are eagles!"

Harry couldn't understand why it hadn't worked. "It worked before..." he started to say, aloud, but he couldn't finish the sentence.

Lisa looked at him wonderingly. Why had she given him such a stupid sentence, Harry thought, with a flash of resentment. But then it occurred to him that, if he had really figured out a rule, it should have worked on stupid sentences as well as on sentences that weren't stupid. So, it really wasn't Lisa's fault.

For the second time, that day, Harry felt that he had somehow failed. His only comfort was that Lisa wasn't laughing at him.

"I really thought I had it," he said to her. "I really thought I had it."

"You tried it out?" she asked. Her grey eyes, set wide apart, were clear and serious.

"Of course. I took sentences like "all planets revolve about the sun," and "all model airplanes are toys," and 'all cucumbers are vegetables," and I found that when the last part was put first, the sentences were no longer true."

"But the sentence I gave you wasn't like yours," Lisa replied quickly. "Every one of your sentences began with the word 'All'. But my sentence began with the word 'No'."

Lisa was right! But could that have made the difference? There was only one thing

to do: try some more sentences that begin with the word 'no'.

"It it's true that 'no submarines are kangaroos,' Harry began, then what about 'no kangaroos are submarines'?"

"Also true," replied Lisa. "And if 'no mosquitos are lollipops,' then it's true that 'no lollipops are mosquitos'."

"That's it!" said Harry, excitedly, "That's it! If a true sentence begins with the word 'no', then its reverse is also true. But if it begins with the word 'all,' then its reverse is false."

Harry was so grateful to Lisa for her help that he hardly knew what to say. He wanted to thank her, but instead he just mumbled something, and ran the rest of the way home.

He made a bee-line for the kitchen, but when he got there, he found his mother standing in front of the refrigerator, talking to her neighbor, Mrs. Olson. Harry didn't want to interrupt, so he stood there for a moment, listening to the conversation.

Mrs. Olson was saying, "Let me tell you something, Mrs. Stottlemeier. That Mrs. Bates, who just joined the PTA, all she ever talks about is helping the poor. Well, I believe in that too, of course, but then I keep thinking how all those Communists keep saying that we ought to help the poor, and that makes me wonder whether Mrs. Bates is, well, you know. . . "

"Whether Mrs. Bates is a Communist?" Harry's mother asked politely.

Mrs. Olson nodded.

Suddenly something in Harry's mind went 'CLICK!"

"Mrs. Olson," he said, "just beca se according to you, all Communists are people who say they want to help the poor, that doesn't mean that all people who say they want to help the poor are Communists."

"Harry," said his mother, "this is none of your business, and besides, you're interrupting."

But Harry could tell by the expression on his mother's face that she was pleased with what he'd said. So he quietly got his glass of milk, and sat down to drink it, feeling happier than he had felt in days.

00008

CHAPTER TWO

The next morning, on his way to school, Harry saw Tony Melillo, who was about to cross the street.

"Hey, Tony!" he called. In math class, Tony was usually the first kid to finish the daily exercises. Harry thought Tony might be interested in what he and Lisa had figured out the day before, so he told him that how they'd discovered you could turn sentences around that begin with "no", but you can't turn them around if they begin with "all".

All Tony said was "So what?"

"So what, what?" Harry replied.

"I mean, first of all, I don't see the point of it. What good is it to know you can turn this sentence around and can't turn that one around? And secondly, when you come to think of it, how many sentences are there that begin with the word "all" or with the word "no"? Very few." And Tony ran on ahead.

But Harry walked slowly, occasionally kicking a stone, and making sure not to step on any cracks in the pavement. Tony's remarks bothered him. Maybe his "discovery" didn't amount to much after all.

The first class that day was math. They were learning fractions. Yesterday Mr. Spence, the math teacher, had been talking about all the different combinations that equal a single number. As usual Tony was the first one to catch on. Harry could overhear him explaining to Timmy Samuels: "It's easy. Look:

eight plus two equals ten
five plus five equals ten
twelve minus two equals ten
twenty divided by two equals ten
five times two equals ten. . . .

Timmy said, after some hesitation, "I can't multiply or divide."

00009

Tony answered impatiently, "You don't have to know how to multiply or divide. It's just a for instance. I'm just trying to show you how many different ways you can make the number ten. There must be thousands of ways, and they're all equal to ten."

Now, sitting at his desk, Harry turned over in his mind the conversation between Tony and Timmy. "If there are many ways of forming a number," he said to himself, "couldn't there be lots of differend words all equal to the same word? Like 'father' could also be expressed as 'daddy' or 'dad' or 'pop'." Then in a flash he had an idea. "Could it be that words like "all" and "no" are really like the number ten that Tony was explaining to Timmy? Because if that were so, then all sorts of other sentences could be *changed* into sentences beginning either with the word "all" or the word "no"!

But when he tried to figure out some other sentences that he could change around the way he wanted to, he couldn't think of a single one.

After sitting there frowning for a few moments, Harry began to wonder whether the other kids in the class might be able to help him. So he raised his hand, and when Mr. Spence called on him, Harry explained his problem and asked if Mr. Spence would allow the class to try to help. Mr. Spence was known to be a "good guy", and Harry was right in thinking he would agree. Mr. Spence even stated the problem over again to the class because, in his excitement, Harry hadn't explained it very well.

The first suggestion came from Randy Garlock. "Look," he said, "suppose I were talking about the kids in this class. I could say, for instance, "*All* the kids in this class are Americans." But I could also say "*Each* person in this class is American," or I could say, "*Every* person in this class is American," and those three sentences all mean the same thing. Because if we're all Americans here, then each and every one of us is an American."

Mr. Spence picked up a piece of chalk, went over to the blackboard, and gravely wrote at the top "Expressions That Mean The Same Thing as 'ALL'." Then he began a list.

1. Each 2. Every

Lisa's hand shot up. "*Any*," she announced. "'cause if we're all Americans here,

00010

then *any* one of us you choose will turn out to be American." Mr. Spence turned back to the board, and wrote "3. Any."

Tony had his own hand up before Lisa had finished talking. "How about the word "a"? he asked. "I mean, if I should say, "A kid who belongs to this class is sure to be an American," that's just the same as saying, "All the kids in this class are Americans," isn't it? Mr. Spence added "4. A." to his list.

"It seems to me," said Mr. Spence, after a moment had gone by without any new suggestions, "it doesn't have to be a particular word at all. It's the way the sentence is constructed. For example, suppose the first word in the sentence is the subject of the sentence itself. If I say "Potato chips are salty," or if I say "Cadillacs are expensive, I mean that *all* potato chips are salty and *all* Cadillacs are expensive."

The class remained silent. Mr. Spence wrote on the board, "5. No modifier at all."

Slowly, Timmy Samuels raised his hand. "Yes, Timmy," said Mr. Spence. "Well," Timmy began hesitantly, "sometimes when I say "*if*" I mean "all." Like, when I say, "If you're a member of this class, then you're an American."

Mr. Spence had just finished writing "6. 'If. . . then. . '." on the board when the bell rang. "Why don't you copy these down in your notebooks?" he suggested. "Then if we think of any more, you can add them." Turning to Harry, he asked, "Were we able to help you any, Harry?" Harry nodded. He was very grateful to Mr. Spence for having stopped the lesson on arithmetic long enough to take up Harry's question.

There wasn't much chance to think about the matter again until after lunch. Harry balanced himself on a little railing that guarded the back steps of the school. "Well, we did get *something* accomplished," he said to himself. "We showed Tony that even if only a few sentences actually do begin with the words "all" or "no," there are lots and lots of others which can be changed to the "all" or "no" form."

But Harry hadn't forgotten Tony's other question, "What good is any of this?" Nor could he think of a good answer.

Just then Tony came along, looking rather glum.

"Hey, Tony, what's with you?" Harry called out.

S 00011

Tony looked as if he were going to turn away, but then he shrugged and sat down on the steps. "My father always talks as though, when I grow up, I'm going to be an engineer, just like him. When I tell him that maybe I'll want to do something else, he gets mad at me."

"Why does he think you'd make a good engineer?" Harry asked.

"Because I always get good grades in math. He says to me, 'all engineers are good in math, and you're good in math, so figure it out for yourself'."

For a moment, Harry didn't reply. He was repeating Tony's words, turning them over in his mind. Then suddenly he exclaimed, "Tony, it's not right!"

"I know," replied Tony, frowning, "it sure ain't."

"I mean," said Harry, "your father said, 'all engineers are good in math', right? But that's one of those sentences which can't be turned around. So it doesn't follow that all people who're good in math are engineers. And I'm sure that's so. I'm sure that there are lots of doctors who're good in math, and airline pilots who're good in math, and all sorts of other people who aren't engineers who're good in math. So it doesn't follow that just because you're good in math, you have to become an engineer!"

Tony didn't say a word. He just stood up, gave Harry a very snappy salute, and raced off home.

Harry decided to try the monkey bars a while before going home. He had a feeling that Tony's father wouldn't be too much impressed with Tony's new argument. But at least he'd gotten Tony to see that the idea had some use. With that thought Harry put the matter out of his mind, and tried a new trick on the jungle gym.

J 100012

CHAPTER THREE

Lisa and Jill Portos had their lunch together, sitting on the bottom step of the fire escape. As they generally did, each took half of the other's sandwich. Jill's was, as always, tuna fish. Lisa's, as always, was peanut butter and jelly.

"You should see my father's face when he sees me mix up peanut butter and jelly," Lisa said. "He says even the *thought* of that sort of gop makes him ill!"

"I know," replied Jill. "My mother always tells me I should drink milk instead of taking a can of grape soda. Milk. Yuk."

But Lisa was still thinking about her father's remark. "The thought of peanut butter and jelly makes him sick? How could just a thought do that?"

"My thoughts make me happy," Jill said, after a moment.

"Like, I think of my dog, Sandy. He's a collie. He's always jumping up on people, and my father calls him Romeo. Or sometimes my father calls him silly names like Haggis McBagpipe or things like that. When I come home from school each day, I take him for a walk, and he urinates on everything that even *looks* like a tree!"

"But I know what you mean," Lisa said, bringing Jill back to the point, "When you're in school you think about him, and it's a nice warm feeling to have a thought you like, and to sort of cuddle it the way you do a doll."

Jill was so glad Lisa understood. "That's right!" she exclaimed, "That's right! When I leave Sandy, the thought of him goes to school with me, and I can almost feel it jump up in my lap to be patted."

Lisa rummaged about in her lunch bag, hoping to find some candy. Reluctantly, she settled for a pear. "Isn't it funny," she said after a while, "our talking about thoughts. You know. Harry Stottlemeier's always talking about how we think. Remember that discussion we had in class the other day?"

"How we think?" repeated Fran Wood, who had just come over and sat down with them.

"Yes, I mean, Harry's always talking about thinking."

00013

"Well, why not?" asked Jill. "We talk in school about everything else—like annual rainfall, and wars, and drug addicts, and en-vi-ron-men-tal pol-lu-tion—."

The girls giggled, recognizing that Jill was imitating Mrs. Halsey, who taught History and Geography. But Fran wanted to talk about it some more. "When you say, 'thinking,' what do you mean—the thoughts we have in our mind—you know, ideas and memories and dreams and stuff like that—or the *way* we think?"

"What do you mean, the way we think?" asked Jill.

"Oh, I know," said Lisa quickly, "it's what Harry and I were talking about, and it's what we called 'figuring things out.' When you already know something, and you want to go beyond what you already know, you have to think. You have to figure things out."

"But just having thoughts is different from really thinking," said Fran. "My mind is always full of thoughts. I don't know where they come from. I guess they're just like the bubbles in my soda - they just bubble up, out of nowhere."

Jill said softly, "I don't think of my thoughts like that. To me they're something like bats, hanging asleep upside down in a dark cave. At night they wake up and they beat around inside the cave making an awful lot of noise, and I can't sleep for all the thoughts that run through my mind. But every now and then one gets out of the cave and then he's changed into a bird - even an eagle, maybe - he's free and away, and there's no holding him, and he can go way, way off, as far away as he wants."

Lisa nodded. "My mind, why, it's like a world of its own. It's like my room. In my room I have my Barbie dolls on a shelf, and sometimes I pick up one to play with and sometimes another. And I do the same with my thoughts. I have my favorite thoughts. And I have others I don't want to even think about."

"But thoughts aren't *really* real," Jill remarked. "I mean they're not real like the things in your room. My thought of Sandy isn't the real Sandy. The real Sandy is all full of fur. But my thought of Sandy isn't furry at all!"

"Well, but it's a real thought," answered Fran.

"Do you mean," Lisa asked Jill, "that if there's something out there that your thought is like, then your thought is just a copy or imitation, and isn't really real? So if there's a dog out there named Sandy, then my thought of the dog isn't really real,

because it's just a copy of the dog? But there are lots of thoughts I have that aren't copies of anything!"

"Like what?" Jill demanded.

"Like, say, numbers," Lisa answered triumphantly. "Did you ever see a number walking down the street, or standing around anywhere? The only place numbers are real is in your mind. And I'll bet there are lots of other things like numbers that are real only in your mind."

"That's right," Fran chimed in. "How about feelings? When I feel sad or happy, aren't these feelings just in my mind? I never saw a feeling walking down the street either!"

Lisa didn't reply. She wasn't sure about feelings. Or at least she wasn't sure just where they were. But she knew she had a mind that was rich in colors and tastes and sounds that she could remember, as well as in ideas that she thought up, or that just popped into her head. She decided she would talk to Harry Stottlemeier about it sometime.

The three girls started slowly back to their classroom. Fran stopped to re-lace her sneakers, and by the time she got back most of the class was looking at the gerbils that Milly Warshaw had just brought in. The bell was about to ring, and the two monitors were still standing at the door. Both boys were large and rather heavy, and they decided to tease Fran by not giving her much room to pass. Maybe they thought they did it because she was a girl, and most likely she thought they did it because she was a girl and black too, but she didn't care for that kind of teasing, and she pushed them out of her way. Mrs. Halsey turned around just in time to see what Fran had done, and she spoke to Fran very sharply about it.

Fran said nothing. Then she did something that no one expected her to do. She got up on the first desk in the front row, and she began to leap gracefully from one desk to the next, until she had circled the room. Then she sat down quietly in her seat.

Long afterwards - for the rest of the day in fact - Lisa had the strange picture in her mind of Fran leaping proudly from desk to desk in that silent classroom. It was an image

00015

that came back to her mind very vividly as she was going to sleep. But then another image took its place. It was a sort of waterhole in the jungle, and lots and lots of animals were gathered around. They weren't doing much; some were drinking, but most of them were just sitting or standing there. And then Lisa noticed something odd about each of them. The zebras had claws. The giraffes had long, furry tails. The elephants had huge whiskers. A buffalo was trying to flatten himself on the ground, preparing to spring upon a green-eyed field mouse. The chimpanzees all had pointed ears and slanted eyes; and a grizzly bear kept licking his paw and then washing his face with it.

Such a peculiar scene! Lisa wondered if she were dreaming. And then, oddly, she remembered something she had been talking about with Harry. "All cats are animals," they had agreed, but you can't turn the sentence around and say that "all animals are cats."

"So all animals aren't cats," Lisa thought to herself, "but in makebelieve they can be! And in dreams they can be. I can imagine what I please, and when I do, Harry's rules won't apply."

It was something that had been troubling her, and now she had worked it out. She felt satisfied, and with a little smile, she fell asleep, and dreamed again of the waterhole where all animals were cats, and of a farm where all the vegetables were onions - even the cucumbers and the tomatoes, and of a world where everyone was ten years old - even the babies and the grown-ups, even her grandfather and grandmother, everyone. And yet, all the while she was dreaming, she knew that when she woke up again, it would be to a world in which all cats are animals, but not all animals are cats.

* * *

But Tony Melillo tossed about on his bed that night and couldn't fall asleep. Tony was proud of the way he found arithmetic easier than most of the other kids did. But he also liked English. Not the stories so much. What he liked best was grammar. Actually, not many kids liked grammar, but Tony did. He liked to see how the parts of sentences were put together. "You can take a sentence apart just like when you take apart an old

00016

alarm clock, and spread all the pieces out on the floor in front of you," he once said to Timmy Samuels. Timmy was always asking Tony how to do his arithmetic or his English homework assignments.

But now Tony kept thinking about Harry's discovery, and what had happened when he tried it out on his father.

"Pa," Tony had said, "remember what you told me the other day, that all engineers are good in math, and that's why I ought to be an engineer?"

Mr. Melillo put down his newspaper, took off his glasses, put out his cigarette in the ashtray and finally answered, "Yes, what about it?"

"Well," said Tony, "look—you said, 'All engineers are good in math.' Okay, and you're an engineer. So you know what that means—it means you're good in math, right?"

Mr. Melillo nodded agreement, and Tony continued: "But, Pa, it just doesn't follow from the sentence 'all engineers are good in math' that I should be an engineer too, just 'cause I happen to be good in math."

"Why not?" Mr. Melillo asked.

Suddenly Tony realized that he had forgotten Harry's explanation. He felt very confused, and he was afraid his father would pick up his paper and start reading again. Then, just as suddenly, it came back to him: "Because you can't turn a sentence like that around!" he said in triumph, and he proceeded to explain to his father what Harry had told him.

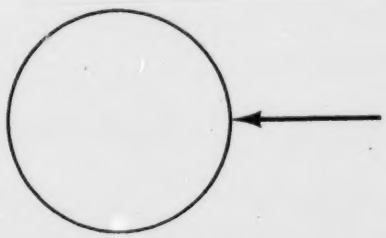
Mr. Melillo listened patiently and then said, "Okay, but I happen to be a guy who always wants to know why things are the way they are. And so what I want to know from you now is—WHY can't you turn sentences beginning with the word "all" around?"

Tony shook his head and admitted he didn't know why.

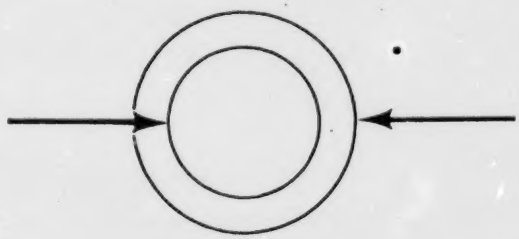
"Well, I don't know either," said his father, "but I'm willing to try to find out. Now here's what I'm going to do." He took an old envelope out of his pocket and began to

00017

write on the back of it. "I'm going to draw a big circle, and I'm going to put a label on it, like this:



What I mean is that all the people who are good in math are inside that circle, just like it was a big round fence. Now I'm going to draw a second circle inside the first one, like this:



This means that the smaller circle fences in only engineers, but all of them are good in math because they also fall within the larger circle. Now you see, Tony, the smaller circle fits inside the larger one, but the larger one won't fit inside the smaller one."

Tony stared at his father, "You mean, that's the reason we can't turn sentences beginning with 'all' around? Because you can put a small group of people or things into a larger group, but you can't put a larger group into a smaller group?"

"That seems to be what it's all about," answered his father.

Tony slapped his hand on the table. "It's like if you say, 'All New Yorkers are Americans,' it sure doesn't mean that 'All Americans are New Yorkers.' Because New York is part of America, America can't be part of New York."

"It also means," said Mr. Melillo, "that even if it's true that all engineers are people who are good in math, it doesn't follow that all people who are good in math are engineers."

"So I was right!" Tony exclaimed.

"You were right," said his father with a faint smile, "you were perfectly right." He put on his glasses, lit another cigarette, and picked up his newspaper again.

00018

CHAPTER FOUR

Lisa did tell Harry Stottlemeier about her talk with Fran and Jill. "Fran says her thoughts are real," she told him.

"My little brother must think so too," replied Harry. "He's two years old and the other day, while he was drawing, I heard him say, "I have a think, and I draw a line around my think!"

"Well, are thoughts real or aren't they?" Lisa demanded.

"I don't know yet," said Harry, pounding his baseball glove. "In some ways, they're even more real than things. Because when things aren't around, we can't be sure they're still there, but our thought we always carry with us. I can close my eyes and make the world disappear, but I can't make my thoughts disappear." And with that Harry took up his position on second base.

Lisa shrugged and went inside. "There's nothing to do!" she thought. Lunch period was only half over.

Mrs. Halsey was seated at her desk, which really looked like a small mountain of papers and books. She nodded at Lisa, then looked out the window again.

"Lisa," she asked, "would you help me? I've got to assign a topic for the themes for this weekend, but I'm not happy with any of the ideas I've had."

"Like what?" Lisa wanted to know.

"Well, how would you like to write a paper on the topic, 'The Greatest Thing in the World'?"

Lisa stuck her lower lip out very far, reflected for a moment, and then said, "Yiiich!"

"Yiiich?" repeated Mrs. Halsey.

"I mean, I wouldn't like to," said Lisa. "Anyhow, what do you mean, 'greatest'? Biggest? Or most important?"

Mrs. Halsey looked puzzled. Then she exclaimed, "Oh, you're right! It could mean both things, couldn't it? Well, how would you suggest I say it?"

00019

"Why don't you just ask us to write about whatever interests us most?" Lisa replied.

Mrs. Halsey nodded. "Thank you, Lisa, I will," she said.

When the class was seated, she announced the topic as "The Most Interesting Thing in the World."

Timmy had his hand up. "Do you mean, when you say 'thing', some kind of educational subject, like History or Biology, or do you just mean the kind of thing you can touch and pick up, like a baseball bat or a tennis racket?"

"Oh my," said Mrs. Halsey, looking directly at Lisa, "I've done it again! Timmy, you're so right to raise that question. I *must* try to be more precise. Yes, a thing can be an object, like a tennis racket, something you can see and touch and measure, or it can be something rather vague and hard to define, like an activity."

"Like doing your thing?" asked Fran, with a grin.

"Well, I was thinking more of activities or processes like breathing or rusting or flying or surfing - things like that," Mrs. Halsey answered.

Harry carefully wrote the assignment in his little yellow notebook. It was Sunday before he thought of it again. As usual, he wrote very slowly. And try as he might, he couldn't make the written words stay on the lines. His theme began this way:

THINKING

To me, the most interesting thing in the whole world is thinking. I know that lots of other things are also very important and wonderful, like electricity, and magnetism and gravitation. But although we understand them, they can't understand us. So thinking must be something very special.

Harry wrote several more paragraphs then put his paper in his schoolcase. As he

00020

did so, a thought struck him. "In school, we think about math, and we think about spelling, and we think about grammar. But who ever heard of thinking about thinking?" And so he added this sentence to his paper;"If we think about electricity, we can understand it better, but when we think about thinking, we seem to understand ourselves better."

Harry's mother sat down at the other end of the dining room table, where Harry had been working. She asked him how he was getting along in arithmetic. It wasn't a topic he particularly enjoyed talking about. So he just said okay, and then it occurred to him to tell her about how Mr. Spence had taken time out of the math class to discuss this idea he'd had about turning sentences around, and how the other kids in the class had joined in to help him make basic sentences that worked like lowest common denominators. He didn't mention anything about how Bill Beck and Sandy Mendoza had teased him about his "simple language," as they called it. Harry didn't like to be teased.

Mrs. Stottlemeier listened carefully. She always looked a little worried, even when she wasn't. "Harry," she said, "it sounds very good, what you're doing. But do you really think you can take all different kinds of sentences, and reduce them to just two kinds, ones beginning with 'all', and ones beginning with 'no' ?"

Harry said sure, but he really didn't feel very sure.

Mrs. Stottlemeier looked around the room - at the fish in the aquarium, at the geraniums in the window, at the books on the shelves. Then she said, "How would you say something like 'Seven chairs are in the room' in your language?"

Harry knew, even before he tried the sentence, that it wasn't going to work. It wouldn't do to say '*All* chairs are in the room," if there were just seven of them. And it surely wouldn't do to say that *no* chairs were in the room. Harry's mother tried to help him, and she thought about it, and they talked about it, but it was no use. Besides, there were other sentences that came to mind just as difficult to figure out. What could anyone do with "Some chairs are in the room," or "Lots of chairs are in the room," or even something fantastic like "Almost all the chairs ever made are in the room"?

00021

The next day, Harry asked Mr. Spence if he had any suggestions. "Well, Harry," said Mr. Spence, "you remember that we wrote a number of words on the board the other day for which it would always be possible to substitute the word "all". Right? Okay, now you tell me that you don't know what to do with sentences that begin with words like "almost all," and "lots of" and "a few" and so on. But isn't there some one single word that could be substituted for any of these?"

"I can't think of any," Harry groaned.

"I can," someone said. Harry turned around. It was Mickey Minkowski who'd been sitting behind him, listening to the conversation. "What you're looking for is a word that covers everything between 'all' and 'no'. So why not use 'some'?"

Harry's first impulse was to say, "Naaah, Mickey, that'll never work!" But the more he thought of it, the more he thought Mickey might just possibly be right. As Mikey had said, he needed a word that would apply to every case that was less than *all* and more than *none*. So why not *some*, just as Mickey had suggested?

By the time Mr. Spence had commented, "Sounds okay to me, Mickey," Harry had already made up his mind.

When it was time for math, Mr. Spence told the class he would take a few moments out to make an addition to the basic language they were developing. And he told them about Mickey Minkowski's suggestion. The class entered in their notebooks, "When less than *all*, and more than *none*, say *some*."

Tony Melillo had his hand up. "I see a problem."

"He *always* sees problems," Harry said to himself.

"What's your question, Tony?" Mr. Spence asked.

"Look," said Tony, "when you were working with "all" and "no," you sort of had like opposites of one another, y'know what I mean? I mean "all" is kind of like the opposite of "no" and "no" is like the opposite of "all". But if you begin with just "some," you don't have anything opposite it!"

"So who says we need it?" Harry asked.

"I say so," Tony snapped, "because there are sentences I could show you."

00022

"Okay, show me," Harry replied. And as he said it, he knew that Tony would. Half under his breath, Harry said, "Stupid!"

"Take a sentence like 'most people aren't poor—' " Tony began, just as if he hadn't heard what Harry had said.

"That's wrong," said Dale Thompson, "Most people aren't rich."

Tony looked annoyed. "It's just a for instance," he said. "But okay, take another example: "Lots of people don't like taking baths." Several members of the class nodded their appreciation of Tony's second example.

Suddenly Harry saw the problem clearly. "The 'some' is okay!" he almost shouted. "The 'some' is okay! It's the *verbs* that change!" The class looked at him blankly. "In one case you have the verb "are", and in the other case, you have the verb "are not"!

Mr. Spence looked at Tony. "Your point was a good one, Tony, very good. But Harry's right too, I think. Let me see if I can't summarize what we now have." He went to the blackboard. "I'll write four different sentences, but with the same subject and predicate, like this:

All classes are interesting.

No classes are interesting.

Some classes are interesting.

Some classes are not interesting.

Harry breathed a sigh of relief. What a big step forward they had taken! He stopped writing in his notebook just long enough to see all the other members of the class carefully writing down what Mr. Spence had just put on the board. Even Tony was scribbling away.

A few days later, Mrs. Halsey gave Harry back the paper he had written on "Thinkking." She'd written a great deal in the margins, but one sentence interested him particularly. "You're right, Harry," she wrote, "there's no fact in all the world that's more wonderful than our understanding of that fact."

Harry read it over and over, with great admiration. "She put it so well," he thought, "I could never put it so well." Then he shrugged.

00023

"Grown-ups," he said to himself. And he snapped h[illegible]riefcase shut, ready to go home. As he stepped out of the side door of the school, a stone whistled past his face and smashed the glass pane in the door. Harry spun around just in time to see someone running, but he couldn't be sure who it was. But Harry's first thought was that the boy who threw the stone was Tony.

00024

CHAPTER FIVE

"Grown-ups!" said Mark Jahorski, when the janitor chased him and his twin sister Maria off the fire escape.

Maria, as usual, was undisturbed. "That's just his job," she commented. "When you have a job to do, you say and do things you may not mean, like when you have a part in a play in school, and you have to say lines you don't mean."

Mark said nothing. His sister was always explaining things to him. He usually disagreed with her, but he seldom knew why.

Harry Stottlemeier came over. He was eating some chocolate-covered raisins. He offered some to Mark, and then, almost as an afterthought, offered some to Maria. They ate the candies in silence.

The Mark spoke up again: "That history class is for the birds! I'm bored to death in there!"

Harry wasn't inclined to argue. "Some classes in this school are good, and some aren't," he answered.

Suddenly there popped in Harry's mind the picture of Mr. Spence writing on the blackboard.

Some classes are interesting.

Some classes are not interesting.

But he waited while Mark went on. "There's not one that's any good," he said, "They're *all* bad."

"Mark," said Maria, with just a note of annoyance in her voice, "just because some classes are uninteresting to you, that doesn't mean that they're *all* uninteresting."

"It doesn't *mean* it," answered Mark. "They just *are*."

But Maria continued as if she hadn't heard him. "In fact," she said, "If some classes are *un*interesting, then it must be that there are other classes that are *interesting*."

Harry looked at her with an expression of disbelief. "Wha?" he asked, finally.

"I *said*," Maria began, and then she repeated her remark. "And I'm not making

00025

anything up," she added. "Go figure it out for yourself."

Mark put a book on the ground, and using it as a cushion, began practicing standing on his head.

"It doesn't follow, Maria," Harry objected. "Look," he said, taking from his pocket the bag of candies, which was still almost full. "Suppose you didn't know what kind of candy was in this bag. And then you saw me take out three pieces of candy, and they were all brown. Would it follow that there were other pieces still in the bag that weren't brown?"

"You mean would I know what color the others were without seeing them? No, I guess I wouldn't."

"That's *right*!" Harry exclaimed. "If all you know is that *some* of the candies in the bag are brown, you can't say what color they *all* are, and you certainly can't say, because some *are* brown, that some must not be!"

Maria said she didn't know what Harry was talking about *at all*, but by that time Mark was back on his feet.

"So if some Martians were to land here on the school yard this very minute, and we would see that they were very tall, what would it mean about whatever other Martians there might be?" Mark asked.

"It wouldn't follow that the others *were* tall, and it wouldn't follow that they *weren't*," Harry answered. "You just couldn't tell one way or the other."

Maria looked thoughtful. "But people are always jumping to conclusions. If people meet one Polish person, or one Italian person, or one Jewish person, or one black person, right away they jump to the conclusion that this is the way that *all* Polish people are, or all black people, or all Italians or Jews.

"That's right," said Harry. "The only exercise some people get is jumping at conclusions."

"Or in jumping on other people," commented Maria.

Mark, however, was still thinking about their earlier topic of conversation: "I still think the history class is awful. In fact, *all* the classes in this school are awful. It's an

00026

awful school."

"Are there better ones?" asked Harry.

"No," Mark replied, "There probably aren't. I know kids in private school and I know kids in parochial school, and from what they tell me, the schools are awful everywhere."

"What makes them so bad?" Harry wanted to know.

"Grown-ups," was Mark's prompt answer. "They run the schools to suit themselves. As long as you do what you're told, you're okay. But if you don't, you're dead."

Both Maria and Harry were a bit upset by what Mark had said. But Maria sat perfectly still, while Harry paced up and down. Finally he picked up a stone and threw it at a telephone pole. It missed by two or three feet.

"Mark," Maria began quietly, "They're only trying to do what's good for us."

"Yeah," said Mark, "and you can be sure they'll call it good, no matter what they do."

"Well, but someone has to run the schools, and so it has to be the grownups, because they know more than anyone else. It's the same way with other things. You wouldn't want to fly on an airplane where the pilot was just a little kid, would you? And you wouldn't want to go to a hospital for an appendicitis operation where the surgeons and nurses were just little kids, would you? So what else is there to do but let grownup people run the schools because they're the only ones who can do it right?" Maria took a deep breath. It was a lot of talking for her to have done.

Mark looked very glum. "I didn't think up the idea that kids should run the schools - you did. Of course—I don't know - maybe if they did, things wouldn't be any worse than they are now."

Harry shook his head. "It isn't a question of whether the grownups should run the schools, or whether the kids should. That's not the question at all. The real question is whether the schools should be run by people who know what they're doing, or by people who don't know what they're doing."

00027

"What do you mean, 'know what they're doing'?" Maria asked.

Harry shrugged his shoulders. "Understand, I guess," he answered. "Whoever runs the schools should understand kids, for instance. I think Mark's right. Lots of times they don't. But the most important thing they need to understand is why we're in school in the first place."

"We're in school to learn." Maria said.

"Are we?" Harry asked. "What are we supposed to learn?"

"Answers, I suppose." Maria wondered what Harry was driving at. Then she thought she caught on. "No, no, I take that back. We're supposed to be learning how to solve problems."

Mark looked at Maria, then at Harry, then at Maria again. "Should we be learning how to solve problems," he said finally, with an air of wondering, "or should we be learning how to ask questions?"

Harry thought he had the answer: "We should be learning how to think," he said.

"We do learn how to think," was Mark's response, "but we never learn to think for ourselves. These teachers don't want to admit it, but I have a mind of my own. They're always trying to fill my mind full of all sorts of junk, but it's not the town junkyard. It makes me mad."

"Well, what kind of school would you like to go to?" Harry asked.

Mark looked for a long time at some pigeons on the grass, and then replied, "What kind of school would I like to go to? I'll tell you what kind of school I'd like to go to. You wouldn't have to go to class unless you wanted to. So they'd have to make the classes real interesting in order to get you interested enough to attend. And, just like in the museum, anytime you wanted to know more about something, all you'd have to do is press a button, and a movie would go on, or a teaching machine would start up. And all the science courses would be taught like science fiction. . ."

"The trouble with what you're saying," Harry interrupted, "is that a lot of stuff that you're taught in school just *can't* be made interesting."

"Sure it can," replied Mark, "look how they make stuff interesting in TV commer-

00028

cials. The commercials are really great, and all they're advertising is a lousy bar of soap!"

Harry grinned. "But that's all phony, Mark, and you know it."

"Sure," said Mark, "you're right. But the advertisers take something unimportant and jazz it up and make it seem glamorous, while here in school they take subjects like history that are really very interesting, and they teach it to you in such a way as to make it seem boring and dull."

Harry shook his head. All he could say was "I don't know, Mark. I just don't know what to say about it."

"Me neither," Maria chimed in, "but I've got to get home. It's getting chilly out here."

The boys went over to the other side of the playground, where a softball game was in progress. They joined the outfielders, then later they each had a turn at bat. After a while the game was over, and it was getting to be late in the afternoon, time to be home. But Harry and Mark still lingered, lying on a grassy slope, chewing clover and wild onion, and looking up at the sky. The sky was clear and dark blue, except for a huge white cloud which was moving slowly overhead.

Suddenly Mark exclaimed, "Harry, it's North America!"

And so it was. There was Alaska, and Hudson's Bay, and Florida, and the Gulf of Mexico. Only, Mexico and California seemed rather blurred and indistinct. The boys watched fascinated as the great white continent swept majestically past into the blue Pacific.

"That was great!" Harry said, when the cloud was now just a blur in the distance.

"Yeah, cool," Mark replied. Then he added, "But you know, it was *our idea.*"

"Whadd'ya mean our idea?" Harry wanted to know.

"I mean," said Mark, "it was a wonderful cloud. But also, when you come to think of it, it was pretty wonderful for us just to lie here and see it as North America sailing across the Pacific. You gotta admit that part of it, too."

Mrs. Halsey's comment crossed Harry's mind again, the way a news flash comes on

OCO 00029

across the bottom of a TV screen:

"No matter how wonderful something in the world may be, *understanding* how it works is something just as wonderful." It wasn't quite the way she'd put it, but it was the same idea.

"I guess," Harry remarked, "you don't have to fly to the moon or travel under the Pacific in order to have adventures or see wonderful things. Sometimes they're right there in front of you for you to see."

"Sometimes I get real excited by my own ideas," said Mark, "and I pace up and down in my room, or I punch my punching bag, or I do all sorts of crazy things until I calm down."

They were silent for a moment and then Harry remarked, "Hey, Mark, who do you suppose tried to pop me with a rock the other day?" and he told Mark in an offhand way what had happened.

"Was that Tuesday after school?" Mark asked.

"Yep," Harry replied, "Tuesday after school."

"I'm not sure," said Mark, "but I came out of school before you did, and I remember seeing that new kid, Bill Beck, standing behind a tree near the side door."

"Bill Beck! Why should he want to pop me," thought Harry. "But for that matter, why should Tony want to either?"

As Harry walked home, he paid close attention to what might be behind trees or waiting around corners. Whoever it was that threw the stone on Tuesday might not miss the next time.

00030

CHAPTER SIX

"There's a tune just keeps going through my head," said Jill. "We have it home on a record, and my brother keeps playing it. It's called 'The Saucer's Appendage' or something like that."

Fran corrected Jill with a grin: "The *Sorcerer's* Apprentice."

Jill laughed at her own mistake. "Anyhow," she went on, "it's like I'm *haunted* by that tune. It comes to me when I'm trying to do my homework, and when I'm trying to sleep, and all sorts of other times. I wish I could just shake my head and make it go 'way, the way my dog shakes water off himself."

It was Friday night, and Fran and Laura O'Mara were "sleeping over" at Jill's house.

"Sometimes I have *dreams* like that," said Laura. "My grandmother was sick a long time, and then when she died, I kept dreaming about her, and I always had the feeling that she was *making* me dream about her. Yet how could that be when she was dead already?"

"Dead people can't do anything to you," said Fran, who then added, "at least I don't think they can."

Jill looked at Fran questioningly. "It's funny," she said, "The last time I heard that record was a week ago, but I've been hearing the music in my mind ever since. It made a strong impression on me. So isn't it possible that Laura's grandmother's death simply made a strong impression on *her*, and that's why she's been dreaming of it ever since?"

Laura shook her head. "When I see the moon, it's because the moon is out there, making me see it, right? And in my mind just now I heard your voice because you were speaking to me. So I think that all the thoughts that are *in* my mind are caused by things that are *outside* my mind."

"That's ridiculous," said Jill, "there are all sorts of imaginary things that are only *in* my mind, and there's nothing like them outside at all."

"Like what?" Laura asked.

00031

"Like—well—vampires, and elves, and Frankenstein monsters," Jill replied.

"Okay," said Laura, "it's true I don't believe in elves and monsters. Vampires I'm not sure about. But even with elves and monsters, there are real people who make them up and tell us about them, and make us think of them."

"Laura," Fran interrupted, "you keep talking about what's *in* your mind, and what's *not in* your mind. But what's a "mind?" And how do you know you have one?"

Laura yawned and somehow managed to stretch out and wiggle her toes under the bedclothes at the same time. "I know I've got a mind," she replied, "just like I know I've got a body."

Jill's father knocked at the door and told the girls it was past midnight and time they were asleep. The girls promised to stop talking (at least Jill did; the others just giggled). But before long they were back on the same subject.

Fran insisted that a person could see and touch his body, but he couldn't see or touch his mind, and how could anyone know his mind was real if he couldn't see or touch it? "When you say 'mind'," Fran concluded, "all you're talking about is your brain."

"There are lots of things that are real, even though we can't see or touch them," Laura objected. "For example, if I go for a swim, is there really some kind of thing called a swim? If I go for a walk or a ride, are there really things called walks and rides?"

"So what are you saying?" Fran asked.

"What I think Laura's saying," said Jill, "is that what we call thinking is something we do, like swimming or walking or riding."

"That's right," Laura agreed, "that's just what I mean. When I said before I had a mind, I meant that I *mind* things. I mind the telephone, or my baby sister, or just my own business. But 'having a mind' is nothing but 'minding'."

But Fran wasn't happy with the solution Jill and Laura had arrived at. "I agree," she said, "that maybe the mind isn't quite the same thing as the brain. I know I said before it was, but I've changed my mind." Everyone giggled for a while, then Fran went on. "What I mean is, you can't see electricity, but it's real. So why couldn't our thoughts

00032

be something electrical in the brain?"

This time it was Jill's mother who told the girls they would have to continue the conversation in the morning.

"Mom," said Jill, "what's a mind?"

Mrs. Portos suspected she was being drawn into a conversation that was already supposed to be finished. But she didn't like to put Jill off, so she said, "When I was your age, Jill, I thought the mind was some thin, smoky kind of stuff, like one's breath —"

"Did you think you could see it in cold weather, the way you can see your breath in cold weather?" Jill interrupted.

"No," her mother replied, "I really thought of it as something real but invisible. You couldn't ever see it, but it was where your thoughts were, and your feelings, and your memories and imaginings, and they too were all made of this same thin, filmy stuff."

"Do you still believe that, Mrs. Portos?" Fran asked.

"Noooo - of course not," Mrs. Portos laughed.

"Well, then what is it?" Jill insisted.

Mrs. Portos put her hand on Jill's head. "I really don't know," she said. Then, after a moment, she added, "And I'm not just saying that because it's late, and I'd rather not discuss it. It's true—I really don't know. But sometimes I think it's nothing but language."

"Language?" Jill asked.

"When children first begin to talk, they talk to other people." said Mrs. Portos. "When other people aren't around to talk to, the children keep right on talking as if they were. In other words, they start talking to themselves. And they talk to themselves more and more quietly until they don't make sounds at all. That's called thinking."

"And you mean," said Fran, "that at first children would see things only when they were present, but when those things weren't present, the children would remember or imagine them? So the thoughts in our minds are really just the traces of things in our memories?"

00033

"Oh my, Fran, I don't know, I never thought of it quite like that," Mrs. Portos replied.

But just then Mr. Portos came in, and wanted to know what everyone found so interesting to talk about at twelve thirty at night - in the morning, in fact - a time when everyone should be in bed.

"We were talking about dreams, and being haunted, and things like that, some of them scary," said Jill. "And then we were trying to figure out what we mean when we talk about a person's 'mind'."

"Let's talk about it tomorrow morning, at breakfast," suggested Mr. Portos.

"I know what it is," Laura exclaimed. "Minds are what people have and animals don't have!"

Mr. Portos found a chair, sat down heavily, and groaned. "No, Laura, no," he said, "that won't do. The difference between man - a creature that has a mind - and animals lacking minds. Not at all. Both are animals. The difference is that man is an animal with a *culture,* and we make the mistake of believing that he has a mind just because he has a culture."

"What in the world is he talking about?" Fran whispered to Jill. "He sounds just like a book!"

"Oh, Daddy always talks that way," Jill replied. "He does sound like a book, doesn't he?"

Poor Laura simply blurted out, "Mr. Portos, I don't understand!"

Mr. Portos looked at her sadly but tolerantly, as though he were very much accustomed to people saying they didn't understand him. "I'll try to explain in the morning," he said to her gently. "Now go to sleep. Good night."

The three girls retired to their beds, and in less than an hour they were sound asleep.

00034

CHAPTER SEVEN

Mr. Portos looked forward to explaining himself to the girls at breakfast the next morning. On previous occasions he had noticed that, whenever he tried explaining his ideas to Jill, she seemed to have difficulty understanding him. And so now he was determined to speak as simply and as clearly as he could, because this particular idea he had seemed especially important to him.

But things started off badly. The girls were late coming down for breakfast, and when they finally did manage to straggle to the table, they were still sleepy and not particularly hungry.

"I'd like to go back to what I was saying last night," he began. He thought he saw Jill nudge Laura with her foot under the table, but he couldn't be sure, so he continued, "You made the statement, Laura, that men have minds and animals don't, isn't that right?"

Laura would have liked to say, "Just forget it, Mr. Portos," but she was too polite. She didn't even sigh, as she was also tempted to do. She simply said, "Yes, Mr. Portos."

Mr. Portos thought he had the girls' attention, so he went on: "Well now, Laura, there is no sharp difference in intelligence between men and animals. It's just a difference of degree, much as the intellectual difference between human infants and human adults is only a difference of degree."

"What do you mean, 'a difference of degree'?" asked Fran.

The other girls nodded, indicating that they too wanted an explanation. Mr. Portos was quite surprised. He had taken it for granted that the girls understood the distinction between 'differences of degree,' and 'differences of kind.'

After some reflection, he said, "You girls are all of different heights, aren't you? Fran is tallest, and Laura is next tallest, and then comes Jill. So you differ when it comes to height, and these are differences of degree. Now do you also differ in respect to weight?"

"Laura is heaviest," said Jill, "then comes Fran, and then me. Are those differences

00035

of degree also?"

"Right," replied Mr. Portos. "But now, the difference between height and weight is itself a difference of kind. It's not a gradual difference; it's a sharp difference. You measure height in inches and feet, while weight is measured in ounces and pounds."

"What's that got to do with minds?" Fran wanted to know.

"Well, as I said before," Mr. Portos explained, "the difference between the mental behavior of the animal and that of man is only a difference of degree, so we really can't say that animals lack minds."

"But *is* there a difference of kind between men and animals?" Jill asked, finally sippping her orange juice.

"Yes, just as I told you last night. Man has a culture, and animals don't." Before the girls could say anything, Mr. Portos continued, "I know what you're going to ask; 'What's a culture'? Well, it's all the different ways of living together that a people in a particular society have developed. It's their language, and their educational system, and their religion, and their arts, the ways in which they make a living, the way they organize their political systems, their marriages, their properties, and so on. And these different ways of living together are then handed down from one generation to the next. In this way, a culture comes to represent all the different life-experiences of hundreds of thousands of generations."

The girls sat looking at Mr. Portos. At first they thought they understood him, but now what he said seemed very difficult to follow.

Suddenly Mr. Portos thought of a way of illustrating what he meant. "Jill," he said, "didn't you tell me you learned about evolution in Sunday School?"

"Sure," said Jill, "we were told all about how our ancestors were apes."

"It would be more accurate to say that we and the apes of today have common ancestors," Mr. Portos commented drily. "But in any case you did learn, didn't you, how some of the reptiles became birds, and how land creatures in some cases became sea creatures?"

"The whale!" exclaimed Jill.

00036

"Right," said Mr. Portos. "The whale is a good example of a creature that used to walk about on land, but as conditions changed and life on land became too difficult for him, he managed to become a sea-going animal. In a manner of speaking, he turned himself into a boat. But now, what does man do when he wishes to travel by water?"

"He builds a ship," Laura answered.

"And if he wishes to fly, does he have to spend millions of years developing wings?"

"No," Laura replied, "he invents balloons and airplanes and rockets."

"Now when the whale went to sea," Mr. Portos said, "he gave up his ability to walk on land. But when man invents a new way to travel, does he give up the old ways?"

"Wait a minute," Fran broke in, "I think I'm beginning to get what you're driving at. You mean that the only way an animal can adjust to the world around him is by changing himself, and if he gains in one way he always loses in another. But man uses his mind to invent new ways of living and adjusting, and he doesn't have to give up anything at all if he doesn't want to."

Mr. Portos sat back in his chair and smiled. "You really do understand, don't you?" he exclaimed.

Jill pushed her chair back from the table. "Maybe she does, but I don't. What we started in talking about was thoughts in our minds. What do boats and airplanes and rocket ships have to do with thoughts in our minds?" she demanded.

"Don't you see, Jill," her father said to her, "all the thoughts that all the people who've ever lived have thought and expressed—all of them remain fixed for all time in human culture. Every time we use an invention or read a book or study a science or listen to music, we're enjoying someone else's idea—someone who may have lived thousands of years ago, and thousands of miles away from here. Just as your memories are fixed in your mind, so the thoughts of mankind are established in human culture, and will never disappear or die out."

Unfortunately, Mr. Portos had to leave, so there was no time for the girls to question him further.

By Monday, Jill could no longer recall the details of her father's theory about the

00037

mind. She tried telling Lisa and Harry about it, but all she seemed able to remember was the distinction between differences of degree and differences of kind. But to her surprise, it interested Harry very much.

"Lisa," Harry said, "remember how we turned those sentences around, and we found that we *could* turn sentences around that began with the word 'no' but we *couldn't* turn them around if they began with 'all'?"

Lisa nodded. She could tell that Harry was excited by the new idea he had.

"Well, look," Harry went on, picking up a piece of chalk, "here's what Jill's father said:" He wrote it out on the blackboard:

Fran is taller than Laura

Laura is taller than Jill.

Can we turn these sentences around? Course not. Because if it's true that Fran is taller than Laura, then it couldn't be true that Laura is taller than Fran."

"So what?" asked Jill. "Anyone knows that."

"Okay," Harry continued, "but now if I take a sentence like this:

New York is far from San Francisco.

and turned it around, it will still be true. So it looks like, when you're talking about certain kinds of relationships, you can turn the sentences around and they'll still be true, but with other kinds of relationships, when you turn the sentences around, they become false."

"I think I've got it now," exclaimed Lisa. "It's just like in arithmetic, where we use 'equals,' and 'is greater than' and 'is smaller than'. You can turn around a sentence containing 'equals' and it will still be true, but if you turn the others around, they'll become false."

"And how about a sentence like 'Bill Beck is mad at Harry'." put in Jill, "can you turn it around?"

Before Harry could answer, he caught sight of someone standing in the doorway. It was Bill Beck, looking very disturbed. An instant later, he was gone.

00038

CHAPTER EIGHT

While Lisa, Jill and Harry were talking together, Mr. Spence was trying to fix a slide projector he had been planning to use the next hour. The other members of the class were seated at their desks waiting for the class to begin. What were they thinking of while they waited?

Milly Warshaw was trying to remember whether or not she had fed her pet gerbils that morning.

Dale Thompson was wondering if his grandfather would buy him a football, as he had promised to do.

Timmy Samuels was trying to decide if his stomach really hurt enough to ask Mr. Spence if he could go home.

Tony Melillo was figuring out the sum of 38 and 93 in his head.

Suki Tong was thinking of her friend Penny, who had moved away four months ago. They'd been neighbors and friends practically all their lives.

Randy Garlock was imagining himself stepping out of the rocket ship - the first person to set foot on Mars. (There would be great caves to explore, filled with crystals of unbelievable colors.)

Luther Warfield was trying not to think of the huge rat which had run across his bed the night before, and which he then saw on the water pipe when he turned on the light. He was sure the rat sniffed his face for a moment.

Micky Minkowski was considering the advantages and disadvantages of wadding up a ball of paper and throwing it at Laura O'Mara.

Anne Torgerson was thinking what a lovely painting could be made of the vase of flowers on the window ledge.

Jane Starr was thinking how unfairly she had been punished that morning, just because she'd given her brother the tiniest push and he was so stupid as to fall over a coffee table and break his arm.

Pam Ridgeway was wondering if her father would ever come home.

AR039

Mark Jahorski was worrying about what he could do if those seventh grade boys would start bothering Maria again on the way home.

Maria Jahorski was wondering if she should expect Mark to protect her, or if she should trust the fact that she could run faster than any girl in the class.

Fran Wood was wondering whether she liked Mr. Spence because he was a nice person and a good teacher, or whether it was because he was also black.

Sandy Mendoza was trying to figure out where he could get a few cents to buy licorice with after school.

Jill Portos was thinking how perfect the whole world was. "How wonderful," she thought, "that the sky should be blue. Blue is just perfect. Of course, if it were green or purple or orange, they're nice colors also, and I think I'd like them just as much as I do the blue."

And Laura O'Mara was wondering as to the best way to persuade her mother to allow her to look at TV that evening.

A few minutes later, while Lisa, Harry and Jill were still talking about sentences that could be turned around, what were the other members of the class thinking about?

Milly Warshaw, having at last remembered giving her gerbils poppy seeds, couldn't recall whether or not she'd given them water.

Dale Thompson was puzzling over why, if Fran got such good grades in arithmetic, he had to get such bad ones.

Timmy Samuels decided maybe he'd just go to the bathroom.

Tony Melillo wondered if he should go over to the front of the room and see what Jill and Lisa were talking to Harry about. He decided not to.

Suki Tong wondered if her bangs weren't too long. But her father had told her he liked them long.

Randy Garlock continued his exploration of a cave that led to the center of Mars. It opened into an enormous room.

Luther Warfield was still trying not to think of the rat. He wrinkled his nose and shuddered.

Mickey Minkowski decided it wouldn't be right to hit Laura with a wadded up ball of paper. He would hit her with a paper airplane instead.

"The shape of the stems and flowers in the vase is beautiful," Anne Torgerson thought, "but the colors are awful. If I paint it, I'll put in my own colors, and they'll be much better."

Jane Starr came to the conclusion that she had the worst, absolutely the worst, family in the whole world.

Pam Ridgeway thought of her father's scratchy beard, and the way he used to throw her up in the air and catch her, while she squealed with laughter. She wondered if she would ever see him again.

Mark Jahorski thought how nice the world would be if there were no more wars, and everyone could have enough to eat.

Maria Jahorski thought how nice the world would be if people only wouldn't argue so much.

Fran Wood considered the way her father had said, "Why not?" when she asked him if a woman could ever be President of the United States. And the way he hesitated and then said, "Why not?" again when she said "Even a black woman?"

Sandy Mendoza wondered why some kids seemed to have money to buy candy and cokes and go to the movies, and he never did. He decided to save up enough for a lottery ticket, and then when he won, he'd buy a real Ferrari racing car.

Jill Portos planned her next sleep-over, with Lisa and Anne. But not with that awful Jane Starr!

And Laura O'Mara wondered why Tony Melillo always seemed to be looking in her direction.

Mr. Spence finally decided to take the slide projector down to the basement to see if Mr. Wilbur, the custodian, could fix it. Harry put the thought of Bill Beck's strange appearance out of his mind, and concentrated on the three different types of sentences.

"I'll tell you what - could we do this?" Harry asked, "Could we put the names of the two different types of sentence on the board, and then let us make up lists of examples?"

00041

At that moment Mr. Spence returned, having met Mr. Willis in the hall and given him the machine to fix.

Mr. Spence (who was the only one there who could reach to the top of the blackboard) agreed to write the two kinds of sentences on the board.

"I still don't understand what this is all about," said Jane.

"Wait," said Lisa, "you'll see."

"Okay," said Mr. Spence, "first column - some examples of sentences that can be reversed."

"Equals," said Lisa. "For instance, 'Three plus seven equals ten'. Turn it around and it's still true, 'the equals three plus seven'."

"I know! I know!" shouted Mickey, "Greater than! Six is greater than two, and when you. . .turn. . .it. . ."

Everyone laughed, even Mickey.

"How about 'is a sister of '?" asked Suki. "If it's true that, say, 'Joan is a sister of Mary,' then it's true that 'Mary is a sister of Joan'."

"Sounds okay," was Lisa's opinion.

But Mr. Spence hesitated, and Tony quickly said, "No, no, wait. Maria is the sister of Mark, but Mark isn't the sister of Maria!"

Again everyone laughed, although some of them didn't know quite why.

Now Mickey had his hand up again. "This time I've got it," he announced. "Unequal to! If it's true that 'nine is unequal to five,' then it's also true that 'five is unequal to nine'."

A scattering of applause was Mickey's reward, and in appreciation he stood up and bowed handsomely until Sandy Mendoza, who was sitting next to him, pulled him down.

Laura suggested "a long way from." "Because," she said, "if my house is a long way from Lisa's house, then Lisa's house is a long way from my house."

Mr. Spence thought it would be all right now to go on to the next column: sentences that can't be turned around. "Let's put down Mickey's first suggestion,

00042

'Greater than', as our first example. Any others?"

Suki had been thinking of her own previous suggestion. "You know," she said, "if I had suggested 'is a cousin of', I would have been right. But that's okay, I can think of something: sentences with 'is the father of '." If Mr. Portos is the father of Jill, then it's false to say that Jill is the father of Mr. Portos."

"Is stronger than," said Dale. Mr. Spence nodded agreement, and wrote 'is stronger than' in the second column.

Dale started to talk to Mickey, and Harry called over to them, "Hey, you guys, shut up a minute!" Mickey just grinned and said, "Shut up, yourself, Stottlemeier!"

But Harry was still thinking about the sentences he had written on the board earlier:

Fran is taller than Laura

Laura is taller than Jill

"Look," said Harry,"if you put these two sentences together, you can see that Fran is taller than Jill."

"Aw, anybody knows that," said Mickey, "Fran's a head taller than Jill."

"What I mean," replied Harry, "is that you can see this just from putting *the two sentences* together."

"It's obvious," Tony put in. "If 8 is bigger than 6, and 6 is bigger than 4, then obviously 8 is bigger than 4. What's so wonderful about that?"

"I think Harry's point is that some relationships sort of carry over, like 'is bigger than,' while others don't." said Lisa.

"I think 'runs faster than' is the kind that carries over," said Maria. "Because if I run faster than Milly, and Milly runs faster than Anne, then it must be true that I run faster than Anne."

Sandy suggested "richer than," and Timmy suggested "busier than". While Mr. Spence was writing them on the board, Mickey suggested "stupider than," but Mr. Spence said "That's enough, Mickey," before Mickey could illustrate his suggestion.

"Now, how about examples of the kind that don't carry over?" asked Mr. Spence.

"Son of," said Fran. "If Mr. A is the son of Mr. B., and Mr. B. is the son of Mr. C., it still isn't true that Mr. A. is the son of Mr. C."

"Five years older than," said Jane. "Because if I'm five years older than my sister Edna, and Edna's five years older than my baby sister Esabel, it still doesn't follow that I'm five years older than Isabel."

"Twice as fast as," said Mark. "Maria's twice as fast as I am, and I'm twice as fast as Mickey. But that doesn't mean that Mari's twice as fast as Mickey."

"If you mean Maria's four times faster than I am, you're crazy," said Mickey. Everyone laughed, because although Mickey was the best wrestler in the class, he was a very slow runner.

Mr. Spence thought it was time he got on with the math lesson. But Harry found it difficult to pay attention. He kept thinking about the carry-over type of relationships. Then he knew what it was: the sentences in his notebook - "All classes are interesting," and so on. But did the word "are" stand for a carry-over relationship? He decided to try it. Suppose we take the sentence, "All history lessons are classes," he reflected, and we add to it, "All classes are interesting," what do we get? Obviously, Harry decided, we get "All history lessons are interesting."

Harry felt he had caught on to something important. He decided to try it again. He took two sentences:

All spaniels are dogs.

All dogs are animals.

Clearly, one could draw the conclusion that "All spaniels are animals," because the relationship was one that carried over. The word "are", Harry concluded, really means "belong to the class of." Saying "all spaniels are dogs" is pretty much the same thing as saying "all spaniels belong to the class of dogs." So sentences with the word "are" are really carry over sentences.

A week went by before Harry had any reason to think about carry-over relationships again. He was doing a homework assignment in geography, and one of the questions was "Are the Shetland Islands part of Great Britain?" Harry knew a little about

00044

the Shetland Islands. He knew it was where Shetland Ponies came from, and Jill Portos had once told him that her miniature collie had come from the Shetland Islands, and was nicknamed a "Sheltie." But he had no idea where the Shetland Islands were.

Harry got out his desk encyclopedia. It said only that the Shetland Islands were a part of Scotland. But that was all Harry needed to know. He was already aware that Scotland was a part of Great Britain. So obviously the Shetland Islands were part of Great Britain.

He even wrote it down on a piece of paper:

The Shetland Islands are a part of Scotland.

Scotland is a part of Great Britain.

Therefore, the Shetland Islands are part of Great Britain.

Harry said to himself, "I'd have figured out the answer without any trouble, even if I'd never heard of carry-over relationships. But now I know how it's done, I mean, how we can take two carry-over sentences, and from them figure out a third sentence. And yet—" Harry wondered, as he turned back to his homework, "do people really think this way very often?" He remembered Tony's comment: "So what? - What good is all this?" And for the first time Harry felt a little annoyed. What good was mathematics or geometry or grammar or history? What good was anything? If thinking about how to add and subtract correctly or how to speak correctly was good, thinking about how to think correctly was good too! It was a little while before he cooled down.

* * *

After school, Tony stopped in to see the tree-house Mark and his older brother were building. Tony had to pull himself up a heavy, knotted rope, but when he finally made it, he found that the platform was quite large and comfortable.

"Boy, I'll bet this'll be great in the winter," he exclaimed to Mark. "You'll be able to have snowball fights from here and everything. And what a lookout tower!"

After they had climbed about on the tree for a while, Tony said, "Mark, did you tell Harry what really happened that day he almost got hit with a rock?"

00045

Mark shook his head and said, "All I told him was that I'd seen Bill Beck there at the time - which was perfectly true. Why? What really happened?"

"Well," said Tony, "you know how Bill has been acting ever since his father was killed in the war. Kind of crazy, like. Well, that day, Harry's father came to school with him for some reason, and Bill saw them, and that seemed to set him off. Then, all day, Harry kept talking about what sentences follow from what sentences - you know the way he talks. And it seemed to bug Bill more and more. So I was walking out the side door that day, and when I'd gotten almost to the sidewalk, I saw Bill wind up just like a baseball pitcher, and I heard him say, 'Okay, wise guy, here's one for you,' and the next thing I heard was this loud crash."

"Why didn't you tell Harry?" Mark asked. "For a while there he thought you did it."

"Well," Tony replied, "actually, I was afraid he'd seen me, and thought I did it. So I was waiting for him to accuse me. But he never did." He slid down the rope, hand over hand, until he reached the ground.

"I think you'd better tell him," Mark called down. "I think he should know."

CHAPTER NINE

Dale Thompson sat at his desk, his face down on his arms so that the other pupils should not see him crying. But the tears poured uncontrollably down his face, dripping off his nose and cheeks and forming a steadily enlarging pool on the desk top.

For the past month, while Mr. Bradley was ill, the home room teacher had been a substitute, Mrs. Cudahy, and now Mrs. Cudahy was sitting silently at her desk, trying to decide what to do about Dale. When it was time to salute the flag that morning, Dale hadn't gotten up from his seat. He wasn't ill; he simply refused to join the other pupils in saluting the flag, and he seemed unable to give a reason for doing so.

Finally, Mrs Cudahy sent Dale downstairs to see the principal, Mr. Partridge. Dale had to sit in the outer office for almost half an hour - a very miserable half hour - until Mr. Partridge was free to see him.

"Well, now, Dale, what seems to be the trouble?" Mr. Partridge asked. His voice was hearty, its tone friendly. It had a soothing effect upon Dale, who began drying his face with his handkerchief, and blowing his nose.

"I couldn't, Mr. Partridge, I just couldn't," he blurted out, between sniffles. "My parents told me I musn't."

"Your parents?" Mr. Partridge was more serious now. "Why should they object to your saluting the flag?"

"It's their religion - it's our religion," answered Dale. "My father showed it to me last night in the Bible. It's in Chapter 20 of Exodus. It forbids idolatry."

"What do you think 'idolatry' means?" asked Mr. Partridge.

"That's what I asked my father," responded Dale, "and he said it was 'bowing down to images,' and he showed me where God said 'Thou shalt have no other gods before me.' He said that saluting a flag is like bowing down to a false god."

"But Dale," Mr. Partridge said gently, "the United States flag isn't an image of anything. It's just an - an emblem or a symbol. And saluting the flag is not the same thing as bowing down to a god or to the image of a god. It's just a gesture of respect for

00047

what the flag stands for."

"What's it stand for?" asked Dale.

"Why, the country - you know that perfectly well," Mr. Partridge replied.

"Well, maybe we aren't worshipping the flag when we salute it; maybe we're worshipping the country the flag represents, and that's what my father and mother object to, because they say we're supposed to worship God and nothing else." Dale stared glumly at the floor.

After a moment of silence, Mr. Partridge said, "I'll tell you what, Dale. You go back to your room, and as soon as I get a chance, I'd like to come down to talk to your class about this, since they all saw this happen this morning, and they may be upset about it."

It was early in the afternoon before Mr. Partridge was able to visit the class. When he arrived, he explained to the class what had happened. He told them why Dale's parents didn't want him to salute the flag, and he also told them why he thought that saluting the flag had nothing to do with religion. Then he asked the members of the class if they had any opinions on the matter.

Mark Jahorski raised his hand. "Mr. Partridge, you say it has nothing to do with religion. But when we pledge allegiance to the flag, we're supposed to mention God, and that seems to me to have something to do with religion," he said slowly.

Mr. Partridge announced that he didn't make up the words of the pledge; they were standard, and children recited them the same way in all schools.

Mark seemed to want to reply, but couldn't find the right words, so he just sat shaking his head. Maria Jahorski spoke up: "Dale," she said firmly, "I definitely think your parents are wrong. Because it's like Mr. Partridge says, everybody does this, salutes the flag, and no one sees anything wrong in it, so why shouldn't you do the same thing?"

"The fact that everyone - or almost everyone - does something doesn't make it right," Dale answered.

"But this is the law of the country!" Maria insisted.

00048

"My parents tell me that the law of God comes first," Dale said softly.

"But couldn't your parents be wrong?" asked Bill Beck.

"The Bible says we're supposed to honor our parents," said Dale. "Would I be honoring them if I disagreed with them about what the Bible tells me to do?"

"But Dale," said Mr. Partridge, "as I suggested to you before, couldn't this all be just a matter of how we are to *interpret* the Bible? Your parents are entitled to their own interpretation, of course, but they could be wrong, couldn't they?"

"Sure they could," said Dale. "But just because they're in a minority doesn't mean they *have* to be wrong. Those who are the majority could also be wrong, just as easily."

Mr. Partridge tried another approach. "As you probably know, Dale," he said, "there are people who are sure they know what the Bible means - maybe your parents are among these - and they believe that the Bible forbids blood transfusions. Now suppose you were very sick, and were going to die unless you could get a blood transfusion, would it still be right for your parents to object?"

Dale squirmed uncomfortably, then sat with his knees drawn up to his chin. "I don't know, Mr. Partridge," he admitted.

Mr. Partridge saw that he was making progress. "So you'll ask your parents to come see me about this?" he urged.

Dale would say only, "I'll talk to them tonight about it."

But Tony Melillo wasn't inclined to let the matter drop just yet. "Dale," he said, "a moment ago you said that you wouldn't be honoring your parents if you disagreed with them. Did the Bible tell you that, or is that something you figured out for yourself?"

"I guess I figured it out for myself," Dale answered.

"And as you admitted, you could be wrong, couldn't you?" Tony continued.

"Sure I could," Dale answered, with a puzzled look, "but how?"

"Well, isn't it possible," Tony asked, "that it's no dishonor to disagree with someone?"

00049

"I don't get you," Dale protested.

"Take Mr. Bradley," said Tony. "He actually likes us to disagree with him. He wants us to have questions about what he teaches us, and if we come to different conclusions than his, he still seems to respect us."

"That's right!" said Randy Garlock. "Remember that time he told us that we ought to compete with ideas in the classroom the way we compete in sports on the athletic field. I think in a way, Mr. Bradley feels honored if we disagree with him."

"I believe you have something there, boys," said Mr. Partridge. "Dale, I'd never counsel you to do something that went against your religious principles. Nor would I tell you that you ought to disagree with your parents. But when you talk with them tonight, couldn't you try to make them see that you wouldn't be dishonoring them if you came to your own conclusions?"

Dale continued to say nothing. But now Mickey Minkowski was waving his arm frantically, and Mr. Partridge nodded to him.

"Mr. Partridge," Mickey began, "it works both ways."

"What works both ways?" asked the principal.

"I mean," said Mickey, "if Dale's parents are to feel honored at his disagreeing with them, then you should feel honored at our disagreeing with you. And in fact, even if we do something that's the opposite of what everyone else is doing, if what we think we're doing is right, and if we can say why we think it's right, then we really aren't disrespectful in doing it."

"But suppose what you're doing is something that hurts other people, what then?" Maria wanted to know.

"I didn't say we should hurt other people," Mickey protested. "But if it's just some kind of ceremony like saluting the flag, and if I really thought it was wrong for me to do it, and if just the same everyone else wanted me to do it and forced me to do it, then they'd be hurting me a lot more than I'd be hurting them."

"Mickey," said Mr. Partridge, shaking his head, "there are some things that people expect of you, and we in the schools wouldn't be doing our duty if we didn't try to show

00050

you what's expected of you. We try to make good citizens of you because society expects you to be good citizens when you finish school. I know that it isn't easy to accept that fact, just as it isn't easy to swallow some bad-tasting medicine. But just as you'll be a healthier person for swallowing the medicine, so you'll be a better person for accepting what I've told you."

Harry Stottlemeier couldn't resist making a comment of his own. "Mickey and Tony weren't asking you to do what was better just for *them*, Mr. Partridge. They were asking you to do what would be better for everyone."

"You mean freedom to do as you please?" asked Mr. Partridge gravely.

"I guess what I mean," said Harry, "is that kids need to be free to think for themselves just as much as grownups do, maybe more so."

"Well," said Mr. Partridge, "take this matter of saluting the flag. I could have tried to settle it privately, but instead I brought it to all of you here for a free and open discussion. Is that the sort of thing you think you want?"

"It's a start," said Harry.

00051

CHAPTER TEN

There was so much talking going on that Mrs. Halsey had to rap on her desk four times to get the class to quiet down. Tony had his hand up. "What is it, Tony?" Mrs. Halsey asked.

"Mrs. Halsey," Tony said, in that clear and distinct way he had of talking, "a lot of us have opinions about what's going on about Dale. Could we have a class discussion of it instead of a regular class?"

"I'm sorry, Tony," replied Mrs. Halsey, "I know that many of you have this on your minds, but we have a lesson in English to finish, and I think we'd better get on with it."

Harry Stottlemeier spoke up. "It really would be sort of English in a way, Mrs. Halsey. Look, why don't you act like a referee or something, and you can criticize the way we express ourselves."

"That's very ingenious of you, Harry," said Mrs. Halsey, "but I can criticize your ways of expressing yourselves when we go over your homework."

"Well, then," said Harry, still not giving up, "how about criticizing the way we reason? We'll give our opinions, and you tell us whether we're thinking well or thinking badly."

Mrs. Halsey sighed. "Just today?"

"Just today," Tony and Harry assured her together.

"Very well then," said Mrs. Halsey, folding up her notebook, "who wants to speak first?"

Surprisingly, Milly Warshaw was the first to speak up. "I think Dale should salute the flag like everyone else," she said.

"Why?" asked Mrs. Halsey.

"Why?" repeated Milly.

"Yes, why, Milly. You just can't state your opinion. You have to give a reason for it. Anyone can have an opinion, but I can't tell if you're reasoning well or badly unless

00052

you tell me why you think the way you do."

Milly looked up anxiously at Mrs. Halsey and said, "But I don't think I have a reason. I just know how I feel."

"Well," answered Mrs. Halsey, "when you've figured out *why* you feel that way, let us know. Who's next?"

"I'll tell you why he should," Bill Beck announced. "The whole country's in terrible shape. All sorts of bad things are happening. It's like a powder keg: one little spark and the whole palce is liable to blow up. So I don't think we can allow people just to go around doing as they please."

Mrs. Halsey didn't respond immediately. She obviously had to give Bill's remarks much consideration. Finally she said, "Bill, at first I thought what you said was a pretty good argument for your opinion. But the more I think it over, the more I'm convinced it isn't. Because really, Bill, you're not trying to *persuade* us to agree with you. You're trying to *frighten* us into agreeing with you. First you tell us you're alarmed at the world situation, and then you say that *therefore* Dale ought to be made to salute the flag. But it doesn't follow. You haven't proved it at all. You haven't shown that everything *will* explode if Dale *doesn't* salute the flag."

The class was not discouraged by Mrs. Halsey's criticisms of the first two pupils who had spoken up. They were already used to her being severe with them about their grammar.

The next one to speak up was Jill Portos: "I think Dale ought to stick by his beliefs, because - because that's what my father says, and he ought to know."

"What do you mean, 'he ought to know,' Jill? Is your father a lawyer or a judge or an authority of some kind?" Mrs. Halsey inquired.

"No, but he's awful smart," was Jill's reply.

"Well," said Mrs. Halsey, "I'm afraid that that won't do. You should only use someone else's opinion as a reason for your own view if that other person is a recognized authority on the subject in question."

Jill wasn't happy with Mrs. Halsey's judgment, but she said nothing.

00053

Suki Tong said she thought Dale should be made to salute the flag, because "rules are rules."

Again Mrs. Halsey had to pause and *reflect before responding*. Then she said, "Suki, I'm going to accept that, even though technically it's wrong. What I mean is that a statement like 'rules are rules' ordinarily doesn't mean very much. It's like saying 'wallpaper is wallpaper' or 'stones are stones'. But sometimes it's become a familiar expression or idiom with a definite meaning that everyone understands, like 'business is business'. In this case, I suppose that what you mean is that if we make rules, we should keep them. So I'd say okay."

Now Mickey's hand was up. "No," he insisted, "rules are made to be broken. Don't you know the expression, 'every rule has an exception'? Well, Dale's case is the exception! Therefore I think Dale doesn't have to salute if he doesn't want to."

Mrs. Halsey looked somewhat pained, but she said, "All right, Mickey, I suppose that if I allowed Suki to use an idiomatic expression as a reason, I'll have to allow you to do the same. But I still think that what you've told me is a pretty poor excuse for a reason."

Mickey looked so hurt that Laura started to laugh, then clapped her hand over her mouth.

But Tony wanted to be heard. "Mrs. Halsey, maybe Mickey didn't say it so well, but I don't think what he said was as bad as you made it out to be."

"How do you mean, Tony?" asked Mrs. Halsey.

"Well, lots of times we'll say that something or other is always true, and we know it really isn't. I mean, we know there are exceptions, but we still talk as if there weren't any. For example, I'll say something like 'all wood floats.' And yet I know that ebony doesn't."

"What's ebony?" whispered Jane Starr.

"It's a magazine," Luther Warfield answered loudly.

"It's a *wood*!" Tony retorted.

Mrs. Halsey quickly intervened. "We're getting away from the subject. Who wants

00054

to be next?"

Sandy Mendoza seldom spoke up in class, but now he seemed to have an idea that he just had to express. "I think," he said in his drawling fashion, "we keep forgetting one thing. We don't choose to go to school. We're made to go to school. And we don't choose our religions, they're given to us when we're born."

"For that matter," interrupted Bill Beck, "we don't choose our parents."

"And for *that* matter," added Jane Starr, "we don't even choose to be born!"

Mrs. Halsey tapped with her pencil on the desk. "Please. Let Sandy finish what he was saying."

"It's okay, Mrs. Halsey," said Sandy, "They were only trying to help me out. What I'm trying to say is that sometimes we don't mind being told what to do, and sometimes we do mind, you know what I mean? I mean like in a couple of years I'm going to join the Blue Falcons, you do what they tell you. They tell you to jump from the roof of one building to another, you jump. They tell you to push one of the Wharf Rats around, you push him around. But the thing is, I would belong to the Blue Falcons because I wanted to. I don't especially like doing those things, but if you choose to belong, you do them."

"That's extremely interesting, Sandy, but what's the point you're trying to make?" Mrs. Halsey inquired.

Sandy shrugged. "I don't know. I mean, I know, but I can't say what I mean any better than I just said it."

Mark spoke up: "I think I can tell you what he means. He means that if you belong to a group, like a gang, of your own free will, then you really have to do anything they tell you. But if you're a member of a group that you didn't choose to belong to, then they shouldn't make you do things you really didn't want to do."

"But be specific," Mrs. Halsey said, "how does that relate to Dale?"

"It means that since Dale didn't choose to belong to his religion, he shouldn't have to do things it tells him to do if he thinks it's wrong to do them."

"Yes," said Tony, "but it also means that since he doesn't go to school of his own

00055

free will, he shouldn't have to do what the school tells him to do, if he really thinks it wrong."

Mrs. Halsey looked questioningly at the three boys. "And does that go for your family too? After all, as Bill just said a moment ago, you don't choose your parents. So do you really have to obey your family?

"I think," said Fran, "that what it comes down to is a matter of trust. I agree with what they're saying, mostly. But I trust my own family. You didn't choose them, but they chose you, and you know they love you. With strangers it's different."

"Lots of times when I'm with strangers I trust them," Jane remarked. "But families can be awful mean sometimes."

"Sure," Fran replied, "but then they're like Sandy's Blue Falcons - you do what they want because you want to continue to belong with them."

Mrs. Halsey thought over what had been said, and then commented, "I've never thought of it quite like that before. Thank you very much, all of you."

00056

CHAPTER ELEVEN

The bell had still not rung for the end of class, so Mrs. Halsey suggested that the members of the class straighten up the contents of their desks in the few minutes that remained. As they did so, these thoughts passed through their minds:

Milly Warshaw: "Imagine Mrs. Halsey saying *she* learned something from *us*! I never heard a grownup say that before. Whenever I ask Daddy or Mommy anything, they've got an answer ready before I've even finished with my question. It's funny—the moment Mrs. Halsey said that, I felt like more of a person. I felt like I knew who I was a little better! I wonder why?"

Timmy Samuels: "I'm glad Dale was absent today. He'd have been sort of embarrassed if he'd heard everyone talking about him like that. I wonder what I'd have felt like if I were sitting in class and everyone were talking about me."

Tony Melillo: "In arithmetic, everything is so exact, so perfect! There are no contradictions, so there are no arguments. But in the real world, there's always someone saying the opposite of someone else. And as for facts— I can't think of a single fact that I know to be absolutely true! I wish everyting in the world were as simple and clear and true as arithmetic is."

Bill Beck: "I just can't believe my ears when I hear these kids talk about their 'rights'. Like Dad used to say, they really don't have any rights, they just have duties. And what's wrong with that? I don't mind if it's my duty to salute the flag! I love the flag. And I get goose pimples every time someone sings the "Star-Spangled Banner" just before a ball game. People *should* love their country, just like they should love their home and their parents. In fact, we call it our 'mother country,' don't we? So it's really like another parent to us. I wouldn't do anything that would show disrespect for my mother, and I can't see why anyone would want to show disrespect for his country by refusing to salute the flag."

Suki Tong: "Anne Torgerson is really a very nice girl! She showed me the watercolor she'd done of the bowl of flowers in the window, and so I showed her the poem I'd

00057

written about snow on the windowsills. After she'd read it, I read it over and over again to myself. Somehow, when a person you like reads your poem and says they like it, the poem seems all fresh and new afterwards. I wonder why?"

Randy Garlock: "I wonder what it feels like to be dead? But that's ridiculous. If you're dead, you can't feel anything. But I can't imagine someone I know to be dead, like Bill's father, even though that telegram from the government said he was. But I'll bet he's not dead, 'cause I just can't imagine what it would be like if he were."

Luther Warfield: "Dale once said to me, 'Hey, Luther, what's it feel like to be black?' and I said to him, 'Man, what's it feel like to be white?' Then he laughed and said, 'I guess it doesn't matter either way does it?' But it does matter. If I were short and fat, I'd be a different person. I can't even imagine myself short and fat. I guess I'm black in the same way I'm tall and skinny."

Mickey Minkowski: "What do I care if Laura talks to Tony? I don't care one bit!"

Anne Torgerson: "At first I couldn't figure Suki out. I couldn't read her face. Then I thought maybe she has a secret. Now I know what it is. She feels things the way I do. When I read her poem just now it was as if she had reached out her hand to me."

Jane Starr: "I hate to stay anywhere I'm not wanted. If I were going to get married, I could go away, but I'm too young to get married. And I'm too young for college. But I do love school—especially biology. Isn't that funny? Maybe I'll be a doctor!"

Mark Jahorski: "That Mr. Spence is a great guy. I like the way he talks to us. He's got guts. He's not afraid of anything. That's how I'd like to be—always able to think for myself and to take care of myself. They've got Dale scared half to death with all that talk about religion and what his duty is. They'll never get *me* to believe those fairy tales!"

Maria Jahorski: "Mark is really something! At home he's as quiet as a mouse, but here in school he's a terror. Or at least he wants everyone to think he's one. I wonder why he acts that way? Are other brothers like that?"

Fran Wood: "I trust Mr. Spence, and I think I trust Mrs. Halsey. But can I trust Mr. Partridge? I'm not sure. I guess it shows that trust is not enough. You've got to be able

00058

to explain why you think the way you do, just as Mrs. Halsey said. But when it got right down to it, all Mr. Partridge would say was, 'That's the way it is because that's the way the Board of Education says it is.' And if we asked Dale's parents, I'm sure they'd say, 'That's the way it is because that's the way God says it is.' But aren't there reasons for everything we're told to do? And when we're told to do something with no reasons given, what reason do *we* have for doing it? I'm puzzled."

Sandy Mendoza: "I don't think I ought to mention how scared I am to join the Blue Falcons. I keep thinking how proud I ought to be that someday I can join them. After all, they're the greatest. At least, they always say they are. So what right do I have to doubt them? Even so, I'm scared."

Jill Portos: "Mark Jahorski makes me sick. Nothing ever satisfies him. He turns his nose up at everything. If I tell him how much I like Mr. Bradley's science class, he laughs. If I tell him how much I like Sunday School, he laughs. Why can't he appreciate how beautiful everything is? I'm sure everyone tries to do his best, and I'm sure that the way things are is just about the best way they could be. Except Mark, of course!"

Laura O'Mara: "I'm really so funny. Dad and Mom are always saying, 'Laura, brush your teeth,' and 'Laura, wash your face,' and 'Laura, comb your hair,' and I hate doing those things and I hate being told to do them. But when I get my Barbie dolls together in the evening, I wash their faces and comb their hair, because I wouldn't want anyone to think they were badly brought up!"

Lisa Terry: "When those seventh-grade boys said I looked like a Pekinese, I ran to the bathroom and looked at myself in the mirror. Pug nose and big forehead and eyes wide apart. They have a point! And crooked teeth too—although those I can get straightened. That's odd, I never wondered before if people would ever think me nice looking! But the other day Grandma said, "Never judge a book by its cover," and it occurred to me that books and people *are* alike in one respect: they're both full of thoughts. I wonder if that's silly? Anyhow, one thing I know for sure is that mirrors lie; they don't show you as you really are."

Harry Stottlemeier: "Mrs. Halsey made me realize something. When the kids in the

00059

class weren't reasoning right, she'd put her finger on the trouble immediately. She doesn't pretend to know what the truth is, and yet she doesn't hesitate a moment when it comes to telling someone he's guilty of sloppy thinking. So I guess I was wrong to hope that I could come up with some kind of idea that would solve Dale's problem and make everyone happy. All I can do is try to tell the difference between thinking well and thinking badly, just like an umpire who stands behind the plate, and even though he can't pitch himself, he knows the difference between a ball and a strike."

Mrs. Halsey: "That poor little boy! I just watch him being ground to pieces between these two great machines, the country operating through the school, and the religion operating through his family. And there's really no sensible way out—that's the tragedy! So what will happen? Dale will be taken out of school and be sent to some private school. And yet—there's this awful thought that haunts me—that for all I tried to teach them to respect each other, and each other's rights, the lesson was only brought home to them when they saw their own school-mate being crushed by a conflict between powerful forces - the family against the school, church against state. And what's to keep it from happening again. No one seems to have learned anything from this."

Mrs. Halsey closed her briefcase sadly and followed the last straggling students out of the room.

00060

CHAPTER TWELVE

It was now a week since Dale had left. As far as the members of the class were concerned, the whole incident was closed. They seldom talked about it.

Lisa pointed this out to Harry. "No one mentions Dale any more," she observed. "You'd think he'd done something wrong."

"What's there to say?" Harry replied.

"It's not a question of what there is to say," Lisa insisted. "My question is, why doesn't anyone want to talk about it?"

"And what's your answer?"

"I think," Lisa hesitated— "I think we're all ashamed, that's what."

"Because we didn't do anything to help him?" Harry asked.

"Yes, I suppose so—although honestly, Harry, I don't know what we could have done. No, I think we're ashamed of the way we think about things, because if people could have realized the awful results of thinking the way they do, they might not be so ready to do bad things."

"You're right," said Harry. "I'll admit it. I feel ashamed. But it wasn't just a little problem which someone can't solve because he's stated it wrong. It was much too big for me to think about clearly."

Lisa shook her head. "You keep pushing us to think about the correct way to think, and that's very important, Harry, and that's why you really shouldn't feel as badly as the rest of us, because in your own way you are doing something about things like this."

Harry noticed that he enjoyed Lisa's praise very much. But he didn't like discussing the way he felt. So instead he remarked, "The trouble is, Lisa, we haven't accomplished anything in weeks." He got out his loose-leaf notebook, and turned to the page on which, many weeks ago, he had written down the four sample sentences that Mr. Spence had put on the blackboard:

00061

All classes are interesting.
No classes are interesting.
Some classes are interesting.
Some classes are not interesting.

Harry scowled at the page. "So where do we go from here?" he demanded.

"Well," Lisa said, "what about those reversed sentences you worked out? Why don't you put them down alongside, in a separate column?"

"There was only one that worked," objected Harry.

Lisa studied the four sentences. "Yes, I remember," she said, "the second one could be reversed. But why not the third? If some classes are interesting, then it must be that some of the things in this world that are interesting are classes."

"Hmmm," said Harry. "Could be!" He wrote two columns in his notebook, like this:

Original Sentence	Reversed Sentence
All classes are interesting.	
No classes are interesting.	No interesting things are classes.
Some classes are interesting.	Some interesting things are classes.
Some classes are not interesting.	

"How come you put a dotted line at the end there?" Lisa wanted to know.

"I figured it out in my head," said Harry. "Not that I mean to brag, but it seems pretty obvious to me that if it's true that 'some classes are not interesting,' it still needn't be true that 'some interesting things are not classes.'

"You've lost me," Lisa said, while looking at Harry with a very sad expression. "When you start saying things like 'It's not true that some interesting things are not classes,' all I can say is 'Wha'?"

"Look," said Harry, "when I say a sentence isn't true, all I mean is that it's false, right?"

Lisa thought this over. "It seems to me you mean a little more than that. When you say a sentence isn't true, you're really contradicting it, aren't you?"

"Keep going," said Harry, "sounds interesting."

00062

"What I mean is, if you say something, and I claim that what you said is false, then what I'm really doing is saying that the opposite is true."

"Okay," said Harry, "the opposite of 'some interesting things are not classes,' is 'some interesting things *are* classes'." Harry thought over what he had just said, and then commented, "That *can't* be right."

"Why not?"

"As Mickey says," grinned Harry, "I'll give you a for instance."

"Don't tell me about that Mickey," Lisa interrupted. "He told me the other day he was raised and born in Brooklyn. I don't think he knew which came first, being raised or being born."

"Anyhow," said Harry, "back to my for instance. Suppose I were to say that all wood floats. Now if you wanted to contradict me, all you'd have to do would be to name one kind of wood that doesn't float, right?"

"Ebony," Lisa responded.

"Sure," said Harry, "ebony doesn't float. That's a fact. But the sentence that contradicts 'all wood floats' is 'some wood doesn't float.' Because if there's any wood at all that doesn't float, then the sentence 'some wood doesn't float' is true, and the sentence 'all wood floats' is false."

"Well, if that's right," Lisa said quickly, "then we have sentences which contradict all our original sentences. The contradiction of 'All classes are interesting' would be 'Some classes are not interesting.' And the contradictory of 'No classes are interesting' would be—"

Harry completed her thought: "Some classes are interesting."

"That's great," Lisa exclaimed. "Let's make another column." She wrote in her notebook:

Original Sentence	Contradictory Sentence
All Classes are interesting	Some classes are not interesting
No Classes are interesting	Some classes are interesting
Some classes are interesting	No classes are interesting

00063

"Hey," Harry said when she'd finished. "The contradictories are just the reverse of the originals. I mean, if you read the column of contradictory sentences from the bottom up, they're the same as the column of original sentences reading from the top down!"

"Why, that's fascinating!" Lisa remarked. "Harry I have an idea! Why don't we give each type of sentence a title. No, I have a better idea. Let's give each type a letter. We can use the vowels from the alphabet. We can call the 'All things are so-and-so' the *A* type sentence. We can call the 'No things are so-and-so' the *E* type sentence. 'Some things are so-and-so' can be *I*, and 'Some things aren't so-and-so' can be *O*."

"What happened to *U*?" Harry asked mischievously.

"What happened to me? Why nothing—oh, Harry, be serious." Lisa tried not to laugh, but couldn't stop herself.

"That's really a very good idea, Lisa," Harry admitted. "Because now, we don't have to say the whole sentence when we talk about it. We can say that A and O contradict each other, and E and I contradict each other. And that's all we have to say, instead of writing out those two columns each time.

At that moment, for no reason at all, Lisa thought of Dale again, on the day he said he wouldn't be coming back. No one said anything to him, because no one had any idea of what to say. Then Harry had fished around in his pocket and brought out a penny in a good luck horseshoe that his father had given him two years before. Harry put it on the desk in front of Dale. Dale seemed on the verge of tears, and Harry thought he would rush out of the room. But Dale managed to sit there, while Lisa gave him the favorite charm from her bracelet, and Fran gave him her teakwood barrette, and one by one, everyone in the class gave Dale something. By now he'd gotten over his embarrassment, and began stuffing the things in his shirt pockets and pants pockets. It was only when the last person had given him a souvenir (it was Millie Warshaw, who had first thought of giving him a gerbil, but then decided on the ring she'd traded for bubblegum wrappers)—it was only then that Dale walked silently to the door, turned for a

00064

moment to wave, and then was gone.

"Gotta go now," said Harry. "See ya."

It wasn't just Harry. It was somehow everyone left in the class who seemed more precious to Lisa than before. They had shared an experience. It hadn't been a pleasant experience, yet it had left her feeling more fond of her classmates than she had ever felt before. "I wonder why?" thought Lisa. "I wonder why?"

* * *

"Martin, is that you?" Mrs. Warfield called from the kitchen.

"Yeah, Mom," Marty Warfield answered, "have you seen Luther?"

Mrs. Warfield called back, "No, haven't seen him since he went off to school this morning. He's usually back by this time."

Just then Luther came in. He was a mess. His shirt was torn at the shoulder, which was scratched and bleeding, and his clothes were all muddy.

"Hey, man," said Marty, "what happened to you? Youget in a fight or something?"

Luther was breathing hard, as if he'd been running. "No, that wasn't it. I got hit by a car."

"Come in here and let me look at that shoulder," said his mother.

"Aw, Mom, it's all right, nothing but a scratch," said Luther. "But my bike—" His voice shook and he couldn't continue.

"How'd it happen?" Marty asked.

"Well," said Luther, while his mother was helping him get his shirt off, "I was going home on Maine Road, and as I was getting to Highland Street, I saw this car coming pretty fast down Highland, but I figured he'd stop, because Highland is a stop street and I never have to worry about it. The cars coming down Highland *always* stop at the intersection with Maine Road. So I just kept on peddling. And first thing I knew, that dude who was driving went right through the intersection, and his rear bumper caught my front wheel and practically ripped it off. I got thrown halfway across the street and almost hit a fire plug."

"Luther," said his mother, "I've told you to be careful. . ."

"I *was* careful, Mom," said Luther, "but how did I know this crazy nut was going right through that stop sign?"

"Y'know," Marty remarked, "you said just now that *all* the cars coming down Highland stop at the Maine Road intersection. But this one didn't. So what you said at first was wrong, wasn't it? You never know for sure what the other fellow's going to do."

Suddenly Luther remembered the discussion they'd had earlier that day. What was it, now? Someone had said that all wood floats, and then Lisa had pointed out that ebony doesn't float, and that meant the sentence "all wood floats" was really false. Because if you try to say "all," but it turns out there's just one exception, then you're wrong.

And now the same thing had happened to him. He'd thought that all cars stop at the intersection. But this one didn't So they *don't* all stop when they're supposed to. "If I'd known that," thought Luther, "I might have been a little more careful myself. I'd have slowed down a little when I saw how fast he was moving."

"It only takes one," Marty said to him gently. "You gotta watch out for those crazy drivers."

"That's right," Luther thought to himself, "it only takes one."

* * *

Harry and Mark spent the afternoon working on Mark's treehouse. When it started to rain, Mark went inside, and brought back two umbrellas, and the boys sat for a while quite happily in their treehouse, shielded by their umbrellas from the heavy downpour. But as it was beginning to get dark, and the rain apparently wasn't going to let up, Mark lent Harry an umbrella, and Harry started home.

On his way, he saw Bill Beck. He was standing in a doorway, trying to keep from getting wet. He scowled as Harry approached, but Harry could tell that Bill was more miserable than angry. Harry joined him in the doorway and shut up his umbrella.

Harry didn't waste any words. "What did you throw that stone at me for the other day?" he demanded.

Bill didn't answer. He just sort of shrugged and looked out into the rain. He was

really bigger and stronger than Harry, but Harry knew that Bill didn't have much interest at that moment in fighting.

They stood there saying nothing. Harry couldn't bring himself to leave, although he didn't know why. Finally, the rain began to get softer and lighter, until before long there were only a few drops coming down.

"Are you going home?" Harry wanted to know.

"Nothing to go home for," said Bill.

Harry thought for a while, then said, "I was going to ask my father and mother if I could have some of the kids to stay over tomorrow night. If it's okay, would you want to come?"

Bill looked straight at Harry, and although he couldn't say anything, he nodded his head to mean yes.

00067

Harry was sure his mother would say no. After all, the last time he'd been allowed to have some friends over for the night, things went pretty badly. It all started when Mr. and Mrs. Stottlemeier got a phone call from Harry's grandmother, and they said they had to go out, and would be gone for about an hour. Up until that time, the boys hadn't exactly been enjoying themselves. Randy had been examining Harry's monster models, and when Frankenstein somehow collapsed, Harry suspected Randy had done something to it on purpose. Meanwhile, Timmy had secluded himself with the TV set in one corner of the room, and Mark had the record player turned up high in the other corner, where he was listening to some of Harry's collection of old Beatle records. After a while, Harry and Randy began swinging pillows at each other, half in fun and half in earnest. With the three cots arranged around Harry's bed, there was no room left on the floor, so they had to chase each other around on top of the cots and the bed. Randy had put his glasses on a dresser, but he stumbled and fell right on the dresser top, smashing his glasses to bits. That annoyed him very much (he could just imagine what his father would say the next morning), so he brought his pillow down on Harry's head as hard as he could, but the pillow ripped, and so, shortly after, did Harry's. Feathers filled the room, swirling about and rising up to the ceiling again as the boys seized new pillows and continued their battle. With all the feathers and noise, Timmy could hardly see or hear his program, but he kept watching unmoved. Just then Mark, who was barefoot, cut his foot on a piece of glass, and went hopping about the house, dripping drops of brilliant red blood on Mrs. Stottlemeier's toast-colored carpet. It was at this point that the Stottlemeiers returned. Mr. Stottlemeier's only comment was, "You mean, the cat didn't throw up *too*?" Mrs Stottlemeier got Mark's foot patched up, and eventually she got the boys to bed. Finally, when everything seemed quiet, the cat threw up on the living room carpet.

So Harry firmly expected the answer to be "No!" But instead his mother rather mildly inquired who would be invited. Harry had already decided a change of guests

00068

would be advisable, so he said "Tony and Bill and Mickey and Luther." To his amazement, his mother said it would be all right.

It was a quiet evening, filled with good conversation. They talked about the motorcycles they would like to have, the movies they had seen and would like to see; they talked about teachers, about parents, about something Jane Starr had said to Mickey, and about something Sandy had secretly shown to Luther; they exchanged exaggerations about how good they were at swimming, and Mickey even claimed he could drive a car; and they spent a long time—maybe a half hour—discussing where babies came from.

"Well, you didn't just think they came out of nowhere, did you?" Tony demanded. "You can't get something out of nothing, you know!"

"Wait a minute," objected Mickey. "Since you're so smart, tell me where the world came from!"

"It was made by God," Luther said. "In the Bible it says that in the beginning God made heaven and earth."

Harry was puzzled. "If that's how it was made—" he paused to search for words, "then it really wasn't the beginning, was it?"

Tony said, "I once asked my father who made God, and he told me not to be such a smart aleck."

"That's because God wasn't made, he was always there," Bill put in.

"Mr. Bradley said the earth and the other planets were once part of the sun," said Mickey.

"But that's the earth," Harry answered, "not the universe. What we're talking about is, how did the universe begin."

"How do we know it began?" Tony asked. "How do we know it wasn't always there?"

"How could anything always be there? Everything has to have a beginning," Luther insisted.

"Well, you said that God wasn't made, but was always there," said Tony, "so why

00069

couldn't someone else say that the universe didn't have a beginning?"

Luther shook his head. "Aw, I don't know. I can imagine the earth beginning, and I can imagine the sun beginning, and I can imagine our galaxy beginning, so I guess I just can't imagine the universe *not* beginning."

"And I can't imagine it *beginning*," Tony answered quickly. "So I guess it's unimaginable, either way. But you don't prove anything at all when you say it's something you just can't imagine happening."

Luther remarked, "When I said before that everything has a beginning, I meant that everything has a *cause*. Everything happens because something else makes it happen. The kettle whistles because of the steam inside, and the steam is there because of the fire heating water, and the fire is there because someone lit the gas, and so on."

Later on, when they were all in their beds, and the room was almost completely dark, Tony returned to the topic they had been discussing. "Luther, you said everything has a cause," he said. "But you know, if all the *parts* of the universe have causes, that still wouldn't prove that the universe itself had a cause."

"I don't get you," Luther said.

"Well, look," Tony tried to explain, "suppose you had a great big machine, really big, but it was made up of little parts."

"So?" said Luther.

"Don't you see," Tony answered, "the parts of a machine could all be small, but that wouldn't necessarily mean that it was a small machine. The parts could be light, and still it could be a heavy machine. So what's true of the part doesn't have to be true of the whole. And so it could be that the parts of the world were all caused, but that doesn't mean that the world itself was caused."

Harry put in, "So we're back to where we were before when you were saying that the universe may not have had a beginning."

"That's crazy," said Bill.

Tony sat up. "Look," he said, "there are two possibilities, right? Either the world had a beginning, or it didn't, right?"

00070

"Right," said Luther. "But there's another question here. That's the question of God. Because, like you just said, there are just two possibilities: either there's a God or there isn't a God."

Bill seemed to find the topic unpleasant. "It isn't possible that there is no God," he remarked.

Tony didn't hear Bill's comment, because he had gotten out of bed and turned on the light. Mickey had already fallen asleep, but the light woke him up, and he pulled his pillow over his head. Tony found a scrap of paper, and said, "Let me show you guys something. My cousin—he's a mathematics teacher in high school—once showed it to me. If you've got two sets, each with two possibilities, that makes four possibilities altogether. For instance, take ice cream. There are two possibilities: either you've got ice cream or you don't. Now take cake. Once again, either you have it or you don't. So now that gives you four possibilities: first, ice cream and cake; second, cake but no ice cream; third, ice cream but no cake, and fourth, neither ice cream nor cake."

"Hey, that's cool," said Luther. "I can do that too. Franks and beans; franks but no beans; beans but no franks; and neither beans nor franks."

From under the pillow came Mickey's muffled voice: "Girls and boys; girls without boys; boys without girls; and no boys or girls at all. Now why don't you guys put out the light and let's get come sleep?"

Everyone said, "Shut up, Mickey" but no one said anything else for a moment.

Then Harry exclaimed, "Hey, Tony, I see what you were driving at! We were talking about whether the world began, and whether there was a God, and you brought that up about four possibilities. So how would that work on what we were talking about?"

"Well, look," Tony replied, "it's easy:

First possibility: There is a God, and the world had a beginning.

Second possibility: There is no God, and the world had a beginning.

Third possibility: There is a god, and the world didn't have a beginning.

Fourth possibility: There is no God, and the world had no beginning."

"The fourth possibility isn't possible," said Bill Beck. "In fact, only the first pos-

00071

sibility is possible."

"Oh," said Tony, "I wasn't talking about what's *true*, I was just talking about what's possible. And as far as I can see, all four of these are possible. Besides, you were contradicting yourself when you said there was a possibility that wasn't possible."

Harry turned off the light again, and then, before he stretched out in bed, he said, half to himself and half to the other boys, "You don't have to be always looking for answers. I mean, you can think about something without having to find out what the right answer is. There are lots of different ways of looking at things and of thinking about things. But I guess you have to find out about them for yourself. You get taught that there's only one way to think, and then you find out there are a lot of other ways that may be just as good. I'd like to find out all the different ways in which it's possible to think."

"And I'm interested," Tony responded, "in finding out the *right* way to think."

Harry would have said "So am I," but by that time he was half asleep.

As for Tony, once asleep he dreamt that he was in a great castle, looking down from a window on the cobblestoned courtyard. A large square had been marked off on the cobblestones, and that square was itself composed of four smaller squares. An old inn stood nearby with a creaking signboard that read, "The Four Possibilities." There was a girl in the courtyard playing hopscotch on the cobblestones. At first he couldn't see who it was. Then she turned around. It was Laura O'Mara. She was smiling and holding out the ball to him, only it wasn't a ball any longer, it was a tomato or apple or something, he couldn't tell what. All at once she disappeared, and he was running from third base during a sandlot game, trying to slide into home plate, and the catcher was a tall knight in armor. The knight lifted his helmet. It was his father. That was the end of his dream.

00072

CHAPTER FOURTEEN

When Suki said she'd never visited the art museum, Anne proposed that they go together the following Sunday afternoon. Consequently the next Sunday they found themselves going from one handsome room to the next. Suki was amazed at the great tapestries, the thick carpets, the magnificent curving staircases. The paintings she found more difficult to enjoy. Anne would watch Suki's face intently as they passed from picture to picture, hoping that at some point it would show some sign of delight. It wasn't, Suki tried to explain, that she *didn't* like the paintings, but she couldn't honestly say that she did.

But when she saw the painting of St. Francis coming out of his cave to enjoy the sun, Suki turned to Anne with a flashing smile, although she said nothing. And when she came upon the life-size sculpture of Diana, the huntress-goddess, slender and lovely and poised, Suki walked around and around it.

"How beautiful she looks without clothes," Suki said at last.

"And how awful she'd look if she had any on," Anne replied, and the girls laughed together. But as they walked from the room, it was Anne who turned and looked steadfastly again for a long moment at Diana.

They turned into the peristyle of the museum—an inner courtyard roofed over with greenish glass. In the center of the pool was a graceful fountain in which bronze cherubs and dolphins played merrily together. And all around the pool were splendid shrubs and plants. A concert in one of the adjoining rooms could be overheard, although the girls had difficulty identifying the instruments. Anne said it was a violin, cello and piano. Suki thought it might be a harpsichord and two violas. (Both of them had played in the school orchestra.)

As they sat on a marble bench, Suki gazed about her with quiet pleasure. But Anne was angry at herself for having forgotten to bring her sketchbook. She would have liked to sketch Suki's face. Suki's face was so marvellously different! Every detail was so delicate and so perfect—her eyes, her cheekbones, her bangs—what a beautiful portrain could be made of them!

00073

"I love these plants," said Suki. "I love all plants. At home we have a garden. I like to see things grow and bloom. And I like digging in the ground. It's funny, sometimes when I'm upset, I'll work in the garden, and I'll feel better afterwards."

"I didn't know you did that sort of thing," said Anne, to whom gardening was rather dirty and unnecessary work. "Why don't your parents take care of your garden?"

"Well, my father does, when he has time, but he doesn't often have time. And I don't have a mother. She died last year."

"Oh!" said Anne. She was shocked that Suki had no mother. Then she remembered something. "But you have a baby brother!"

"Yes," Suki replied with a little smile. "I usually take care of him. He's so nice. He'll soon be three years old."

Anne didn't have any brothers or sisters, so she didn't quite know what to say. After a moment, she remarked. "But I do love flowers too. Especially when they're freshly cut, and I can arrange them in a vase myself, and if I like them enough I sometimes paint them." She paused again, then asked, "Did you ever try writing a poem about flowers?"

Suki laughed. "I tried, several times, but they weren't good. You know—you've read them. They were in the school paper. They're very ordinary. But I did once write a poem about flowers that I still like. It had only five words:

"Gardeners,"
Roses think
"Never die."

Anne had forgotten that she'd read the poems. For a moment she thought of protesting that she hadn't thought the poems were ordinary at all, but she couldn't remember them very well, so she said nothing.

Suki traced her finger along the giant leaf of a philodendron. "I suppose I like cut flowers too," she said, "but they die, and I don't like to watch things die." Suddenly she remembered something, and her face lit up enchantingly. "Once we had a plant called a night-blooming cereus. Did you ever see one? They're tropical plants. They bloom only once in four years. The night it was about to bloom, we put spotlights

00074

around it, and had a big party with all our friends, and stayed up all night. And oh, the bloom was so beautiful! You should have seen it! It was something like a huge lily, but very deep inside. It was lovely!" Suki sighed, then she smiled as she caught sight of a cherub wrestling with a dolphin.

Anne smiled too, not at the cherub, but because it made her so happy to see Suki happy. "Oh, Suki," she exclaimed, "you've got to come to my home some time. We've got all sorts of interesting things there. My mother paints, and she has her paintings hanging all over the place, but you probably wouldn't like them. But my father has the most wonderful collections. You should see his butterfly collection. He's got them in glass cases, so carefully arranged and pinned—"

Suki tried not to shudder, but she couldn't help it, and Anne couldn't help seeing it. Anne reproached herself for not having realized that Suki couldn't stand to see things hurt. She couldn't even stand hearing about them being hurt.

Anne put her hand on Suki's for a moment. "Suki, I'm sorry. I suppose it is cruel, pinning butterflies, although my father does anesthetize them first. But I wish you would come home with me. My father and mother would love to meet you. They'd find you so interesting!"

"Like a butterfly?" Suki asked, and instantly she could have bit her tongue, she was so sorry she had said it. It was a cruel thing to have said, Suki thought, and Anne had meant no harm. As for Anne, her eyes filled with tears, and her face was flushed.

"No, Suki, no, no, it's nothing like that!" was all that Anne could say. She didn't think Suki's remark was cruel, because she thought she'd somehow deserved it. "Suki thinks of herself as a perfectly ordinary person," Anne thought to herself, "so I guess when I said my parents would find her interesting, she must have thought I was treating her like some kind of freak! And maybe I was. After all, when her family had all those friends in to see that night-blooming plant, there wasn't anything wrong with that, because a plant is just a thing. But Suki's a person, and you don't treat a person like a thing, no matter who it is! And that's what I was doing. It's like I was *using* her, the way I use the cut flowers when I arrange them to make a still life. Oh, I feel awful!"

00075

Then Anne found Suki tugging gently at the puff of her sleeve. "It's all right, Anne," Suki said gently, "it's all right. I shouldn't have said that, and I'd love to come visit you."

As they traced their way back through the rooms of the museum, Suki stopped in front of a portrait. "He's pretty, isn't he?" she said with a smile.

"That's Titus," replied Anne. "He was Rembrandt's son. I think he was about eight years old when this was painted, and I think he died a little while later."

Suki was no longer smiling. "Poor man," she said, "it's hard to lose someone you love very much."

As they walked home through the park, Anne said, "It's funny, to me that was always just a nice painting. But to you, it was like it was a real person."

"Oh, no," replied Suki, "I know the painting wasn't a real person. In fact, I guess that's why I've never liked paintings much, because they're not alive. I like when you point out the colors to me, and how they're arranged, but to me, paintings have always been just big smeary squares of canvas. It's only when it's got something to do with life or with people that I can find any interest in it." Suki smiled when she saw Anne frown at her remarks. "After all," she concluded, "people and things are very different, and to me a painting is just a thing."

"But you like plants," protested Anne, "and plants are just things."

"Well, but they're living things," Suki countered.

"Maybe they're living," said Anne, "but they've got no feelings, and they don't show any kind of expression. And yet paintings, even though they're just things, do show expression. So it's not as simple as you thought." To herself, Anne added, "It's not as simple as I thought, either."

Suki said softly, "I've always thought of paintings as just pretty things, like bracelets—you know, something ornamental. I never thought of them as having feelings."

"Well, they don't *have* them," replied Anne, "but they do *show* them. And not only feelings, but ideas too. Lots of times I can just look at a painting and it's as if I

000076

knew right away what the painter's thought was."

Suki considered what Anne said, then she responded, "So plants are part of nature and don't show feelings. And paintings are man-made, and they do show feelings. But what about the human face and the human body? They're not man-made, and yet they do show feelings. So that's a third type altogether, isn't it?"

Anne put her arm around Suki's shoulder and gave her a little hug, and though she didn't say a word, she smiled as if to say, "Yes, Suki, that's it, yes. . . yes. . . yes."

* * *

The same Sunday, Lisa and Fran went to the movies together. There were a lot of love scenes in the movie, and a lot of kissing. The girls weren't very thrilled, however, and spent much of their time whispering together, exchanging seats, snickering, giggling, munching popcorn rather noisily, and going back and forth to the rest room. When the movie was over, they didn't talk about it at all to one another, except to recall the part where the bride fell into the pool and then went ahead and got married soaking wet.

Fran didn't live far from the theatre, so that afterwards Lisa agreed to stop in at Fran's for a while before going home.

"How many brothers do you have, Fran?" Lisa asked, looking at some snapshots on the dresser.

"Three," said Fran, smiling, "all younger than me."

"That's funny," said Lisa, "I have three brothers too, but they're all older than me—lots older. I'm the youngest. But they're nice, my brothers, even though they do tease me a lot. When they start teasing me, I think I could murder them. I could just strangle them." She laughed as she said it, and Fran knew she really didn't mean it. Fran agreed that her own brothers sometimes drove her just about out of her mind, but on days when they were away, like today, she missed them a lot.

"Two of my brothers are in college," said Lisa. "When I grow up, I'm going to college too, the same one they're at, although of course they won't be there then." After a moment, she added, "Will you—go to college, Fran?"

000077

"I'm sure I will," Fran replied quietly. "I want to be a lawyer."

"Why a lawyer?" Lisa asked.

"Because I think lawyers can do the most for black people, and I want to do all I can for my people," Fran answered. "It's as simple as that."

Lisa picked up a little wooden carving. "This is nice," she remarked. "Where did it come from?"

"From Nigeria," said Fran. "My uncle visited there once and brought it back with him. I'd love to go there some day."

"Aren't the people there awfully backward?" Lisa asked.

"Well, they're poor, yes," Fran replied quickly, "and they don't have all sorts of things that we have here. But if you mean are they a bunch of savages, I'd say no. Let me tell you something," Fran went on, her eyes flashing, "over here, in this country, no matter how good times are, there are always lots of people who are starving, and no matter how bad things get, there are lots of people who have plenty. But my uncle told me that in West Africa, it's not like that. Over there, when there's starvation, no one has plenty, and when there's plenty, no one starves. So what I want to know is, who're the savages, them or us?"

Lisa said nothing. She was very much impressed with how strongly Fran seemed to feel about some things. Lisa would have liked Fran to talk some more about herself and what she believed, but suddenly Fran was her old self again, and seemed unwilling to talk about anything that might be personal. It occurred to Lisa that it must have been just as rare for Fran to invite someone to her home whom she was not very familiar with as it was for Fran to discuss her thoughts about herself with anyone. Lisa had no wish to invade Fran's privacy, and she decided to change the subject.

"Fran," she said, "tell me, what do you think of what Harry and Tony are doing?"

"You mean turning sentences around, and asking what follows from what, and always asking for reasons whenever anyone says something, and always wondering how to explain things that happen?" Fran replied.

Lisa nodded.

00078

"I don't know," said Fran. "I guess it's okay, but I'll bet they've got a long way to go yet. Look, it takes years and years to learn all there is to know about mathematics, and I'll bet the same thing is true with what they're trying to do."

"That's right," Lisa responded, tossing her long hair back over her shoulders, "that's perfectly right. I really don't mean Harry. He's very excited about it, and he works hard on it, and lots of times he doesn't get anywhere and he knows it. But Tony thinks everything's very simple. Like he has one number, he adds a second to it, and then he figures out what the third one is—it's the sum of the first two—you know, like seven plus three make ten. So he thinks that if you take one sentence, and you add another one to it, you should be able to get a third sentence which is the result of adding the first two together."

Fran laughed. "I think it annoys you a little that Tony is right so often," she remarked, "but in this case, he is right, isn't he?"

Lisa laughed too. "Yes, he's right. I guess what really bugs me about him is not that he's often right. It's that he seems to think boys are so much better than girls."

"Funny," Fran replied, "that never seems to bother me. I guess the people who're always trying to prove something are the ones who really don't believe it. Tony's scared to death of failing at anything, so he never tries anything except what he thinks he can be good at. Harry's a little different."

Lisa had picked up a pencil and a yellow note pad from Fran's desk, and had been doodling on it. But now she wrote down one of the examples that she and Harry and Tony had talked about a few days before.

All dogs are animals
All collies are dogs

Therefore, All collies are animals

"See," she said, pointing with her pencil to the first two lines, "it's just like Tony said. If you're given the first two sentences, you can figure out the third, just like adding two numbers together and getting their sum."

00079

Fran studied the example for a few moments and then commented, "No, Lisa, it's not quite the same. Because a sum is *equal to* the two numbers you've added. But what you have here is a conclusion that you've drawn from the two sentences you started with. And the conclusion isn't the same as those two starting sentences."

Lisa frowned. "Why not?" she wanted to know.

"Because, look," Fran pointed out, you had the word "dogs" in your first sentence, and you had it again in your second sentence, but in your third sentence, it's missing completely!"

"That's right," Lisa exclaimed, "it drops out!" She bit the rubber eraser on the pencil for a moment and then she said, "Let's try another example and see if the same thing happens." On the yellow pad, she wrote:

All girls are people
All bobby-soxers are girls

Therefore, All bobby-soxer are people.

"You see," said Fran, triumphantly, "the word "girls" appears in each of the first two sentences, but that seems to cancel it out. The other words, "bobby-soxers" and "people" appear only once in the first two sentences, but then they show up again in the conclusion."

"There's something else I notice," Lisa said. "In the first sentence, the word "girls" is in the beginning, but in the second sentence, it's at the end. I wonder if that makes a difference."

Fran quickly saw the point. "There's only one thing to do," she asserted. "We've got to see if it still works changed around some other way. Let's see now. . ." and for a moment she buried her face in her hands and concentrated. Then suddenly she threw her hands apart, and with a flashing smile she said "I've got it! How about this." And taking the pencil and pad from Lisa, she wrote:

All minnows are fish
All sharks are fish

Therefore, All minnows are sharks

00080

Lisa looked at Fran with a startled expression. "It didn't work," she exclaimed. "Minnows aren't sharks. It must be that when you put the word "fish," the word that cancels out, *at the end* of each of the first two sentences, you made the conclusion turn out false!"

"Well, that's wonderful!" Fran said enthusiastically. "I think we found out something that Tony and Harry ahve been looking for all along and couldn't find—the secret of why some pairs of sentences produce a true conclusion, and some produce a false conclusion."

"Wait," said Lisa, who was just as excited as Fran, "let me try one more example."

All jackrabbits are mammals

All jackrabbits are swift

Therefore, All mammals are swift.

Fran clapped her hands together. "Oh, Lisa, Look! You put the word that cancels out—*'jackrabbits'—in the beginning* and again that made the conclusion false!"

Lisa replied, "Fran, I don't think we can say for sure yet that what we've done is right. There may be cases like the one I gave you before where the conclusion turns out true instead of false. Maybe we just haven't tried enough different types yet and maybe there's some rules we don't know yet."

Not many days later, Lisa got on the bus in the morning to go to school, and to her delight found Fran on the same bus. The two girls chatted together for a few minutes. Then they became aware that the two men sitting in the seat in front of them were talking rather loudly, and seemed angry about something. The girls were about to decide that the men were just talking about politics, when they overheard one of the men say, "This country is really going to the dogs. And it's all because of these people who're always agitating for their civil rights. Every time I look in the paper, I read about some lawyer defending some radical. Did you ever notice how all the lawyers in this country are in favor of civil rights? And did you ever notice how all the radicals in this country are in favor of civil rights? So what more proof do you need that all lawyers are radicals?"

00081

Fran quickly opened her notebook and wrote in it:

All lawyers are people who favor civil rights.

All radicals are people who favor civil rights.

Therefore, All lawyers are radicals.

And underneath, Fran wrote the example which she had used the other day:

All minnows are fish.

All sharks are fish

Therefore, All minnows are sharks.

She showed her notebook to Lisa and Lisa squealed with delight: "I know, I know— I noticed the same thing. It didn't follow then that all minnows are sharks, and it doesn't follow here that all lawyers are radicals."

The bus stopped in front of the school and the girls got out. Lisa swung her hair back and Fran patted her Afro absent-mindedly. Then Fran smiled and said, "At least there's one thing I learned."

"What's that?" Lisa asked.

"The sort of things that will be said about me if I ever get to be a lawyer," Fran replied.

00082

CHAPTER FIFTEEN

Harry had just finished putting a coat of silver paint on his plastic model of a space station when his father put his head through the doorway and asked, "Like to take a walk, Harry? I'm going out to get some cigars."

Harry quickly scrubbed the paint from his fingers with some turpentine, while his father waited for him outside.

As they were walking back home, Mr. Stottlemeier removed the cellophane wrapping from one of the cigars, bit off one end, lit the other, puffed a moment on the cigar, and then blew a smoke ring in the air.

"Dad," said Harry, "why do you smoke?"

"Because I like to," Mr. Stottlemeier replied.

"But they say that smoking causes cancer," Harry insisted.

"Only if you smoke too much," answered Harry's father.

"I don't see how you can be sure you're not smoking too much," said Harry. "Besides, I tried taking a puff on your cigar, and it tasted awful."

"Well," said Mr. Stottlemeier, "that's good. Maybe you won't pick up the habit that way."

"Dad," said Harry, after a few moments, "you said you smoke because you like to. But did you like to at first?"

"I don't remember. It was a long time ago. It seems to me I didn't like it much at first, but then I kept on smoking and pretty soon I began to like it."

"How long ago was it?" Harry wanted to know. "When you were in high school?"

Harry's father laughed. "No, actually it was later. It was when I was in the Army."

"When you were overseas in Korea?"

Harry's father nodded. He very seldom seemed to want to talk about the time he was in the Army.

After a pause, Harry asked, "How do wars start, anyhow?"

"Oh," said Mr. Stottlemeier, "you know how it is. People hate each other, and the

00083

first thing you know, they're fighting."

"Did you hate the Koreans?"

"You mean the *North* Koreans," said Mr. Stottlemeier. "We were fighting *against* the North Koreans, but *with* the South Koreans. To tell you the truth, I could never see much difference between them."

"But you did hate the North Koreans?" Harry asked.

"No, I don't think I did," his father replied. "Maybe now and then I did, toward the end, but not at first."

Harry looked puzzled. "Dad," he said finally, "you said before that first people get mad at each other, and then they fight. But in your case it worked the other way around. You were fighting in the war, and only later you got mad. How come?"

"I don't know how come, Harry," said Mr. Stottlemeier. "I never really thought of it that way. I don't know how come."

They stopped at a street corner and waited for the traffic light to change.

"Dad," Harry said, as they were crossing the street, "I hate to be a pest—"

"But you've got another question!" Harry's father laughed. "Well, what is it? Pester away!"

"I was thinking—you said that you smoke because you like to. But you also said that when you first started, while you were in the Army, you were smoking before you liked to. I don't get it."

"What do you mean," his father asked.

"I mean, what came first, the smoking or the liking to smoke?"

"The smoking."

"That's what I thought," said Harry.

The next day, Mr. Bradley demonstrated a U-tube to the science class. He poured a beaker of water in one side, and after bouncing up and down a moment, the water settled down to being the same level on both sides of the tube. "Now you see," said Mr. Bradley, "many, many years ago, people were very superstitious, and they thought that the water was like a living thing. When they would see water from mountain springs run

00084

down to the sea, or when they would watch rain water flatten out on the ground, they would say, 'Water seeks its own level.' But of course, that was wrong. The water wasn't *trying* to find its own level, was it? It doesn't have a mind. It's just a thing, just a physical object. So in the U-tube here, when the two sides finally become even, it isn't because 'Water seeks its own level', as people used to say. It's just that water obeys the law of gravity."

Tony's hand shot up. "Mr. Bradley, wouldn't water have to have a mind, in order to do what you said, 'obey the law of gravity'?"

Mr. Bradley grinned and shook his head. "Tony, you're perfectly right. That was a foolish thing for me to have said, and I'm not laughing at you, I'm laughing at myself. Of course water doesn't *obey* the law of gravity, the way a person obeys a traffic light. The law of gravity doesn't tell things how they *ought* to behave; it just describes how they *do* behave. So it's silly for me, or for anyone, to say 'water *obeys* the law of gravity'."

Some of the members of the class saw the point and were amused along with Mr. Bradley and Tony. But others didn't get it. Mr. Bradley started to explain, but unfortunately the bell rang, so he didn't get a chance to finish.

He didn't forget. The next day, he showed the U-tube experiment again, and explained about the law of gravity again. Then he started talking about rocks, and he passed samples of all different kinds of rocks around the class. The class was delighted with them. Timmy Samuels held up one piece which sparkled in the light, and asked what it was.

"That's mica," said Mr Bradley. "Look, you can chip of little fragments of it with your fingers."

"How come you can see through it?" asked Mickey Minkowski, who had taken the piece from Mr. Bradley, and was squinting at it with one eye.

"Well," said Mr Bradley, "it's almost transparent."

Hesitantly, Harry raised his hand. "Mr. Bradley," he said, "maybe it's a kind of stupid question to ask, but when Mickey just now asked you how come you could see

00085

through the mica, you said because it was transparent. So my question is, can you see through it because it's transparent, or is it transparent because you can see through it?"

"Ah," said Mr. Bradley, "that's a good question, Harry. The answer may be a little difficult for you to follow, but let me try to explain it to you. You see, things that we can see through are *called* 'transparent,' right?"

"Right," said Harry.

"Okay," said Mr. Bradley, "so that means that things are *described* as 'transparent' if we can see through them. But it would be wrong to say that we can see through them *because* they're transparent."

"But that's just what you *did* say," said Mark.

"If I did, I shouldn't have," Mr. Bradley agreed. The word 'transparent' is just a name, and you don't explain a particular kind of behavior just by pointing out the *name* of that behavior."

"That's right," said Tony. "If we were down on the Gulf of Mexico, and the wind was blowing 200 miles an hour, and somebody said to me, 'Hey, Tony, why's the wind blowing 200 miles an hour?' and if I said, 'Because it's a hurricane,' that wouldn't be an answer, because I'd just have given a *name* to what was happening, I wouldn't have explained it."

"Right," said Fran Wood. "Like if I asked you why someone I know hated certain types of people, and you said, 'Because he's a racist,' That wouldn't be an explanation, because 'racist' is just a name for someone who hates certain types of people. It isn't the cause of their acting that way."

"I've got another example," said Randy Garlock. "If I stretch a rubber band, and it snaps back, I call it 'elastic'. But it doesn't snap back *because* it's elastic; it's just called 'elastic' because it snaps back."

"And sugar doesn't dissolve because it's soluble," said Lisa. "It's just that it's called 'soluble' because it dissolves."

"How about this one?" said Jane Starr. "People don't fight all the time because they're 'combative.' It's just that 'combative' is a word to describe people who fight all

the time. It isn't the *cause* of their fighting, it's just a description."

When Harry heard Jane's remark, his mind drifted away from the classroom conversation. He was reminded of his conversation with his father the other evening. What he and his father had been talking about was something like what Jane had said, and yet it was different. What was it: do people fight each other because they're already mad at each other, or is their fighting the cause of their hating one another?

Then Harry remembered what they had said about smoking. From the way his father described it, Harry concluded that at first his father hadn't liked smoking, but after he'd tried smoking for some time, he got to like it, so that now his liking it was the *cause* of his smoking, whereas at first, his smoking was the cause of his liking it.

In the same way, Harry thought, a soldier might find himself in the Army, and be forced to fight, even though he didn't hate the 'enemy'. But after a while, after he had been fighting long enough, he might develop a hatred that would then cause him to fight some more.

So what starts out as the cause may wind up as the effect, Harry said to himself, and what starts out as the effect may wind up as the cause.

Then suddenly Harry felt himself a little annoyed. And he knew he wasn't annoyed with himself. He was annoyed with his father. "I asked him why he smoked, and he told me because he liked to. But his liking to is just the *cause* of his smoking, and I didn't want to know the cause, I wanted him to give me a good *reason* for smoking. He should have tried to *prove* to me why he smokes. I'll bet if he did, I could have proven to him why he shouldn't." But then Harry shook his head. He knew his father would never try to prove that what he did was right. So Harry turned his attention back to the rock on his desk.

00087

CHAPTER SIXTEEN

Both Tony Melillo's mother and his father had to leave early each morning to go to work. It was much too early for Tony to go to school when they left, so they would set the alarm clock for him, and he would get up and dress, eat his breakfast and make his lunch with no one else in the apartment. But his mother always worried that he would oversleep, and as a result would be late to school. In fact, that's exactly what she would say to him every night, before he went to sleep: "Remember, Tony, if you oversleep, you'll be late to school."

That weekend, the Melillos took a long trip, by bus, to visit Tony's grandparents. They didn't get back until late Sunday night. It had been a long, tiring weekend, and Mrs. Melillo was particularly worried that Tony might not be able to wake up the next morning when his alarm went off. As usual, she told him, "If you oversleep, you'll be late to school." But this time he *did* oversleep. And he *was* late to school. That was Monday.

Monday evening, Mrs. Melillo repeated her usual warning to Tony about oversleeping. The next morning, Tony got up promptly when the alarm rang. But he had forgotten to get his clothes ready the night before, and now he couldn't find his shirt. He looked desperately through his dresser drawers. There wasn't a single shirt to be found. Finally, he decided to wait until his mother arrived at work. He then called her, and she told him to look among his father's shirts. He did and found that his shirts had been mixed in with his father's, but by the time he got dressed, he was late for school. That was Tuesday.

On Wednesday he was late once again, because he stopped to watch some firemen rescue a little boy from a house that was on fire.

It was very unusual for Tony to be late at all, not to mention being late three times in one week. He didn't like being late.

Besides, Tony kept a diary in which he noted things that happened to him. And something puzzled him. His mother always warned him, "If you oversleep, you'll be

00088

late." Well, what happened on Monday proved that she was right, because on Monday he'd overslept, and as a result he was late.

But what about Tuesday? He didn't oversleep on Tuesday or Wednesday and he was late anyhow on both those days.

Tone was tempted to forget it, but he couldn't get it out of his mind. He had a hunch that some kind of rule was there, just waiting to be discovered—a rule that would help him to figure things out. But he didn't know what it was. So he decided to talk to Harry about it.

But before he could say anything about it to Harry, Fran and Lisa came running up.

"Did you hear," Lisa said breathlessly, "Jane Starr claims that Sandy Mendoza stole her briefcase, and she had a wallet in her briefcase, and she says she had five dollars in her wallet that her mother gave her to buy music books with."

"What does Sandy say?" asked Harry.

"He says he didn't do it," Fran answered. "He says he'd been teasing Jane earlier, making believe he was going to take her briefcase, because she'd told him she had some money in it. But he claims he didn't steal it."

"Where are they now?" Tony wanted to know.

"They're searching all over the school building, to see if it's hidden somewhere," said Lisa.

Tony wasn't very much interested in Jane's troubles. He returned to the subject he wanted to discuss with Harry. Tony would have preferred to speak to Harry alone, without the girls being present, but he didn't want to be rude and chase them away, so he decided to tolerate them. He told Harry what he had figured out so far.

Harry immediately got down to business. "Look, Tony," he pointed out, "what your mother said—it has two parts to it. The first part is 'if you oversleep,' and the second part is 'you'll be late'."

Lisa couldn't restrain herself. "And Tony, don't you see," she said, "each of those parts can be either true or false! I mean, either you do oversleep, or you don't. And

00089

either you're late, or you aren't."

"Right!" exclaimed Harry. "Gee, Lisa, you've really got something there! Because now, don't you see, we can take what Tony's mother said, and we can ask, what happens if the first part is true? Or, what happens if the first part is false? Or, what happens if the second part is true? Or, what happens if the second part is false? Don't you see, Tony, it's like your 'four possibilities' again."

By now, Tony was very excited. "Hold it, hold it, hold it, hold everything—let me get some chalk." He quickly erased the blackboard and began writing on it:

Monday "If you oversleep, you'll be late."
First part true: I overslept.
Result: I was late.

Tuesday "If you oversleep, you'll be late."
First part false: I didn't oversleep.

Wednesday "If you oversleep, you'll be late."
Second part true: I was late.

Thursday "If you oversleep, you'll be late."
Second part false: I wasn't late.

The two boys and the two girls stood back for a few moments, looking over what Tony had written.

"What are you trying to do?" Fran asked. "I'm not sure I understand."

"We're trying to see what follows," Harry explained. "Look, it's easy to see in the case of Monday. Tony was told that if he'd oversleep, he'd be late. Monday, he did oversleep. So it follows that he would be late. And he was."

"Trouble is," said Tony, "what about the other three days?"

"Well," said Lisa, "in the case of Tuesday, nothing follows. You didn't oversleep. So you *might* have come in on time. But something else might have happened to make you late."

"That's just what *did* happen," said Tony. He didn't feel like telling the girls he was late because he couldn't find a shirt to put on. "So okay, let's say that, where the first part is false, nothing follows."

00090

"In that case," said Fran, "the same thing is true regarding Wednesday. If all you know is that someone was late, you really can't tell if it was because he overslept, or because of something else that happened to him."

"So let's put down, where second part is true, nothing follows," said Tony.

"But what about Thursday?" asked Harry. "Suppose all you know is that the second part was false. Does it tell you anything about the first part?"

"It has to," said Fran. "If Tony got to school on time Thursday, that means he couldn't have overslept."

"That's right," said Tony, "I didn't."

"You know what that means?" exclaimed Harry, "that means if the second part is false, then the first part is false too!"

From the back of the room, Mr. Spence's voice could be heard saying, "Beautiful, - just beautiful." He'd been sitting there on one of the desks, and they were so busy writing on the blackboard, they'd never noticed him. Now as he walked up to the front of the room, Harry remembered a remark Suki had once made, that Mr. Spence walked 'like an energetic cat.'

"Would you like me to summarize for you what you've done?" he asked.

"Please do," said Fran. The others just nodded.

"Well," said Mr. Spence, "what you've discovered is true for all compound sentences beginning with the word 'if'. When you have a sentence like that, then there are two times when you can reason with it: when the first part is true, and when the second part is false. In other words, if you're given that the first part is true, then the second part must be true. And if you're given that the second part is false, then the first part must be false."

"Can you give us an example?" asked Lisa.

"Sure," said Mr. Spence. "Take this sentence: 'If you're vaccinated, you won't get smallpox.' Now suppose I tell you that Harry here was vaccinated. On the basis of that one fact, what could you figure out all by yourself?"

"That's easy," Lisa laughed. "That Harry won't get smallpox."

00091

"And now," said Mr. Spence, "one other case. But this one is harder. Suppose I told you that someone I know had just contracted smallpox. What could you figure out from that?"

"I don't know," said Lisa. "I give up."

"I know," said Fran. "What follows is that the person you're speaking of must not have been vaccinated."

"Right," said Mr. Spence. He turned to the board and wrote:

If he's vaccinated, he won't get smallpox.
Second part false: He got smallpox.

Therefore, First part false: He hadn't been vaccinated.

Just then they were interrupted by the entry of Mr. Partridge and Jane Starr. Jane was holding her briefcase.

"Where did you find it?" Lisa asked.

"Behind the water cooler," said Jane. "Sandy must have stuffed it there, and planned to come back later and get it."

"Where's Sandy now?" Mr. Partridge asked. "Anyone seen him?"

"Not me," said Harry.

Tony shrugged.

The two girls shook their heads.

"Wait a minute," said Harry, "Jane, where did you find the briefcase?"

"Behind the water cooler upstairs on the third floor."

"Okay," said Harry. "And what time was it when you saw it last?"

"I remember I had it at two o'clock, which was when Sandy was teasing me about it in the back of the classroom here."

"And what time did you notice it was missing?" Harry persisted.

"At about two forty-five," replied Jane. "I remember looking up at the clock just about then."

"Okay," said Harry. "Well, I remember something too. I happen to have been in the classroom from two o'clock until two forty-five, and I remember very clearly that Sandy was in the room all that time. He never went out. Now, if Sandy has taken the

00092

briefcase, it would still be here in the room. But it wasn't found in the room. Therefore, Sandy didn't take the briefcase."

Mr. Partridge looked at Mr. Spence, and Mr. Spence looked at Mr. Partridge. Mr. Partridge raised his eyebrows and looked very solemn. Then Mr. Spence grinned and rubbed Harry's head. Harry laughed and ducked away.

Meanwhile, Tony wrote on the blackboard:

If Sandy had taken the briefcase, it would
still be here in the room.

Therefore: First part false: Sandy didn't take the briefcase.

But then Lisa had an idea. "You know what I think? I think Mickey took the briefcase."

Mr. Partridge looked at Lisa. "That's a serious accusation, Lisa. What makes you think it was Mickey?"

"Well," said Lisa, "that business of hiding it behind the third floor water fountain. That's just the sort of thing Mickey would do if he'd stolen something. I'll bet anything it was Mickey."

"You know what, Lisa," said Tony, "you know what it seems to me you're saying? You're saying this:

If it was Mickey who took the briefcase, then

he would have hidden it behind the water fountain.
Second part true: *the briefcase was hidden behind the water fountain.*

But what follows? Nothing. We already agreed that just because the second part is true, you can't prove that the first part is also true. It's like what happened to me on Wednesday."

Just then Sandy rushed into the room, pulling Mickey by the wrist. "Okay, Mickey," he was saying angrily, "tell them what happened."

"It was just a joke, honest, Mr. Partridge, it was just a joke," Mickey whimpered. "I got sore at Jane because, whenever I was called on in math and couldn't figure out the answer, she'd whisper, "Idiot!" at me. That's why I took her briefcase. I didn't mean any harm!"

00093

"But you were ready to let Sandy be blamed for it," said Mr. Spence, "and that wasn't being fair to him, was it?"

Mickey shook his head, looked at the floor, sniffled, and shook his head again. Mr. Partridge said he would like to talk to Mickey and they went out together.

"Well," said Lisa, "I was right, wasn't I? I said it was Mickey, and it was!"

Fran and Harry looked at each other, but said nothing. Tony, however, couldn't help saying, "Lisa, you were right, but for the wrong reason. You just made a lucky guess, that's all. But you couldn't prove it."

Lisa laughed. Her eyes, set wide apart, twinkled mischievously. "Sure," she said, "I'll admit it. I couldn't have proved what I said. But I had a feeling, you know what I mean—a kind of hunch. And my hunch turned out to be right. After all, that's what's important, isn't it?"

Mr. Spence picked up his briefcase. He was ready to leave for the day. But he couldn't go without remarking to Lisa, "Yes, Lisa, you made a shrewd guess. And as it happened, you were right. But if you'd been wrong, another innocent person, like Sandy, would have suffered. You weren't actually wrong to have tired guessing who might have done it. But guessing isn't a substitute for careful investigation. What it all amounts to is that I don't like reckless accusations."

Harry nodded his head in agreement. And it occurred to Fran that Mr. Spence was really very nice after all. She and Lisa walked home together. As for Tony, he had a lot to write in his diary.

00094

CHAPTER SEVENTEEN

"Mr. Spence," said Harry, "after vacation, will you keep on letting us talk about this reasoning stuff in your math class?"

"Why, of course," Mr. Spence replied, "if that's what you'd like, and if the class is agreeable too, I think it would be great!"

Tony said, "Sure, let's keep on," and Mark and Fran nodded agreement.

But Lisa raised her hand, and Mr. Spence called on her. "I think we've played around enough with these silly rules," said Lisa. "I think we should just have math in math class, and if Harry and Tony want to talk about any of those other things, they can do it on their own. They're really the only ones who're interested in it anyhow."

Harry was so surprised by Lisa's remarks that he could hardly find anything to say, and since Tony didn't think anything Lisa said was important enough to answer, he didn't reply to her either.

So it was left for Fran to say, "But Lisa, I don't understand you. For a long time you seemed to be very much interested in talking about how we think and all that. So how come you're against it now?"

"Yeah," said Mark, "how come?"

"Well," Lisa began doubtfully, "it's not that I'm *against* it. I just wonder if it's worth while, or if it's really just a waste of time."

Mr. Spence had thought at first that Lisa might not be serious, but now he realized she was. "You mean, you don't think you learned anything, Lisa?" he asked.

Lisa pursed her lips for a moment, and then she observed, "Let me just say that I don't think I learned anything I didn't already know."

"Well, if you already knew it, you couldn't have just learned it," Maria Jahorski put in.

Lisa glanced at her quickly and said, "Obviously."

Harry was still trying to understand what was happening. He couldn't believe that Lisa would suddenly want to give up, just like that, because she didn't think they were

00095

getting anywhere. He kept trying to think if he had said anything to offend her, but he couldn't think of a thing except maybe that Lisa had been offended when Tony and Mr. Spence had criticized her for accusing Mickey of taking the briefcase. But now several of the other members of the class were beginning to say that they agreed with Lisa.

Harry knew that if he couldn't speak up now, the whole project would be dropped. There would be no more class discussions about ideas and thinking and what was important and what wasn't important, such as he'd enjoyed so much in the past few months. He felt the class was looking at him, so he raised his hand, although he didn't know what he was goint to say. He couldn't face the class; he turned to Mr. Spence. "Mr. Spence," said Harry, "I guess in a way Lisa's right. I guess different people understand things in different ways. Maybe something that seems clear to her doesn't seem clear to me, so I have to figure it out, and she thinks I should have known it all along. I don't know what else to say."

Harry had hoped he might be able to say something very clever, and he was disappointed in himself. Also, he felt he had let the others down too. Like Mark and Tony and Fran. Even though he knew he couldn't count on them to say anything, he also knew they counted on him.

Suddenly, Mickey Minkowski commented, "I don't know about anybody else, but I thought I learned something. Like I learned which sentences contradict which, and that's something we were never taught in English."

And Laura O'Mara said, "And I still remember about how you can't turn a sentence around that begins with the word 'all', like the other day when Randy said to me, 'all girls are finks,' and I said to him, "Well, maybe so, but it doesn't follow that all finks are girls, because I know at least one who isn't!"

The class laughed, Randy included.

Lisa raised her hand. Half under his breath, Tony said, "Aw, Lisa, why don't you flake off?" Mr. Spence frowned at Tony and called on Lisa. "I've been thinking over what Harry said," she remarked. "He said we each learn differently. Maybe he's right. My mother says I jump to conclusions all the time, and maybe that's what I was doing

00096

again. Anyhow, I didn't mean that we shouldn't talk in class about things we think are really important."

"I'm glad you're finally getting around to admitting it, Lisa," said Tony sarcastically. "Because you know darn well that what's true is true, and if it's worthwhile finding out about, we should find out about it."

"What's true is true," Lisa repeated coolly. "What are you going to tell us next, Tony, that cows are cows? Or that 2 equals 2?"

Mr. Spence was about to rap on the desk for order when Harry indicated he wanted to say something again.

"You know," said Harry, "I can't help noticing something. Tony and Lisa aren't really disagreeing about what's true and what's not true. It's just that Tony is used to finding things out step by step, according to rules, the way we do in mathematics, while Lisa seems to size things up very fast, like she'll have a hunch or something, and right away she has the answer. But it's just that they have different methods of finding out."

"That doesn't prove his way is any better than mine," said Lisa.

"He can show how he proceeds, and you can't," said Harry.

"What makes you think I can't?" Lisa answered.

Now Mr. Spence did rap on the desk. There was silence in the room for a moment, and then Fran spoke up.

"It seems to me," said Fran, "that Tony and Lisa could both be right. I don't know quite how to say this because I haven't thought of it before. But I've been thinking, while I've been sitting here listening—I've been thinking of how all of us are here in one room. And it's the same room for all of us. And yet—" Fran stopped. "Oh, I don't know."

"Go on, Fran," Mr. Spence said gently, "what is it you started to say?"

"I can't seem to express it," said Fran. "But you know, here I am, sitting in the back of the room, and you're up there at the front of the room. And what do you see? You see faces. And what do I see? I see the backs of people's heads."

"And I'm sitting on the side of the room," exclaimed Anne, "and I see everyone

00097

from the side. I see their faces in profile."

"Well, that's what I mean," said Fran. "We're looking at exactly the same people in exactly the same room, and yet what we actually see is altogether different."

"So what you're saying," said Anne, "is that each of us is in the same world, yet we see things altogether differently. Oh, I know that's so true, because when Laura and I go to art class together, and even when we choose exactly the same still life to do, her paintings come out altogether different from mine. I think Fran's right. I think each of us lives in his own world that's altogether different from other people's."

Now Harry was waving his hand wildly. Mr. Spence nodded at him.

"Anne," said Harry, "I think you didn't interpret Fran correctly. I mean, I don't think that's what she was trying to say. Sure, from the back of the room, she sees a roomful of people with their backs turned to her, while Mr. Spence sees only faces. But the important point is that, if she were to go up front, she would see only faces, and if Mr. Spence were to go to the back of the room, he would see only backs of heads."

"Harry," said Lisa, "is all you're trying to say, that we should try to see things from other people's points of view?"

"I guess so," said Harry.

"Well," exclaimed Lisa, her eyes sparkling, "why doesn't anyone here try to understand *my* point of view? I disagree with you, and right away everyone accuses me of copping out on the class, or of being a fink, or something like that."

"Lisa," said Mr. Spence, "I don't think anyone here called you names or accused you of copping out. The trouble is, you've never really explained to us what you were objecting to. I wish you'd try to do so, just one more time. We'd like to be able to see things from your point of view, Lisa, but you haven't yet told us what it is."

"I don't think I can, Mr. Spence," Lisa said, trying to keep her voice steady, but not quite succeeding.

"Well, what started you thinking this way?" Mr. Spence persisted in asking. "Was it something someone said here in class?"

Lisa shook her head. "No," she said, "no, it wasn't anything that anyone here said.

00098

It was something my father said to me. Well, it wasn't something he said, really, it was something he read."

"When was this?" asked Mr. Spence.

"Oh, about a week ago," Lisa replied. "I'd been telling him how we were studying the mind, and trying to discover how it works, and he was very much interested. Then he got out a book that I've often seen him read. It's a book of poetry, and he showed me a poem about the mind, but I couldn't understand it. It had a nice beginning: 'the mind is an enchanted thing', or something like that, but all the rest of it was over my head. Then he showed me another, and even though it was also hard to understand, I thought it made more sense. It said the thoughts in our minds are like bats in a cave, and these ideas go flying about blindly, keeping within the walls. But then, in the last line, the poem says that every once in a while, 'a graceful error corrects the cave'."

"What does *that* mean?" asked Milly.

"That's what I asked my father," said Lisa, "and he tried to explain to me how something that seems to be a mistake may then turn out to be true, but this only happens if all of our knowledge is changed. Like he said, take Columbus. Everybody said that the world was flat, and that if Columbus kept on sailing he'd fall off the edge. They thought he was making a mistake. But afterwards they realized that if the world was understood to be round, it was no mistake at all."

"So what are you saying," asked Tony, "that instead of learning how to think straight, we should learn how to make fancy mistakes?"

"I'm just saying," said Lisa, "that you should keep an open mind, and don't think you know it all because you've figured out a few rules of thinking." Lisa looked for a moment more at Tony, and then glanced across the room at Harry. "I'd like to keep working on it, I really would. It was fun. And it does seem to work with the way we talk. But I don't think it works with the way we imagine, or the way we feel about things, or the way we dream. . . ."

Lisa might have said more, but at that moment the bell rang.

The last class of the day was over. Mark and Maria went home together. Lisa and

00099

Fran walked out together, still talking about who was right and who was wrong. Bill Beck went out alone, but he nodded at Harry as he left, and Harry nodded back. Harry and Tony walked out together, saying very little to each other; Laura O'Mara lingered behind, watching them go. Then Anne and Suki left together, and the room was empty, except for Mr. Spence. He sat at his desk, motionless in the silent room. Then he said to himself, "Sometimes, a graceful error corrects the cave." He liked the sound of it. He liked the idea of it. Once again, he said it to himself: "Sometimes, a graceful error corrects the cave " Mr. Spence smiled, snapped his briefcase shut, carefully closed the door to the schoolroom, and ran down both flights of steps, two steps at a time and out the front door, while a perplexed Mr. Partridge stood in the lobby and watched through the glass doors as Mr. Spence's tall figure disappeared quickly down the street.

00100